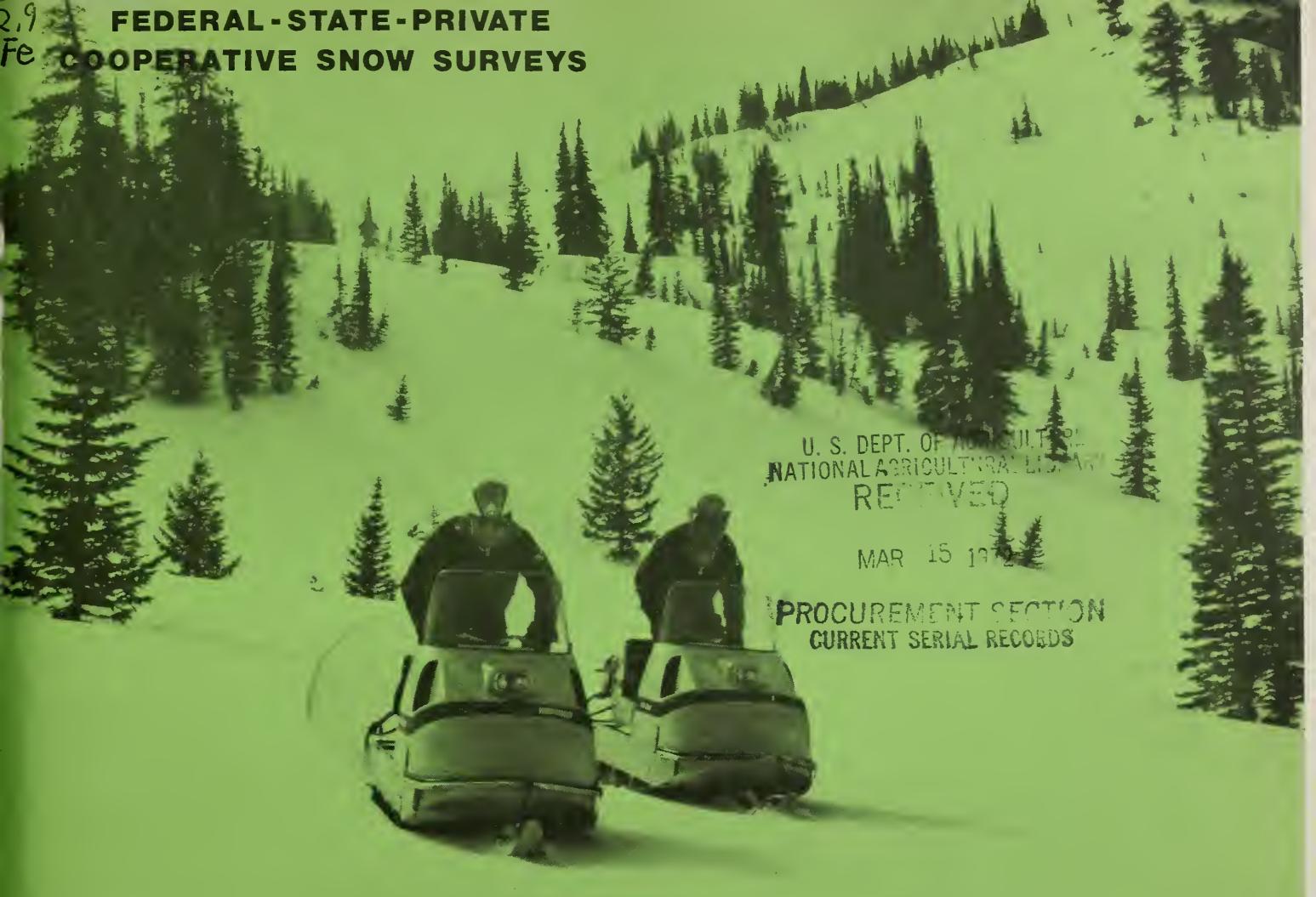


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COOPERATIVE SNOW SURVEYS



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WATER SUPPLY OUTLOOK FOR WASHINGTON

Prepared by

U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Collaborating with

DEPARTMENT OF ECOLOGY STATE OF WASHINGTON

Data included in this report were obtained by the agencies named above in cooperation with the U.S. Forest Service, U.S. Geological Survey, National Park Service, and other Federal, State and Private organizations.

AS OF
MAR. 1, 1972

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters of key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

COVER PHOTO NUMBER ORC 221-3

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 970, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84111
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82601

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



WATER SUPPLY OUTLOOK FOR WASHINGTON

and
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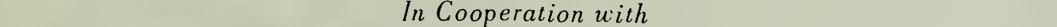
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KENNETH E. GRANT
ADMINISTRATOR
SOIL CONSERVATION SERVICE
WASHINGTON, D.C.



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STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
SPOKANE, WASHINGTON



In Cooperation with

JOHN A. BIGGS

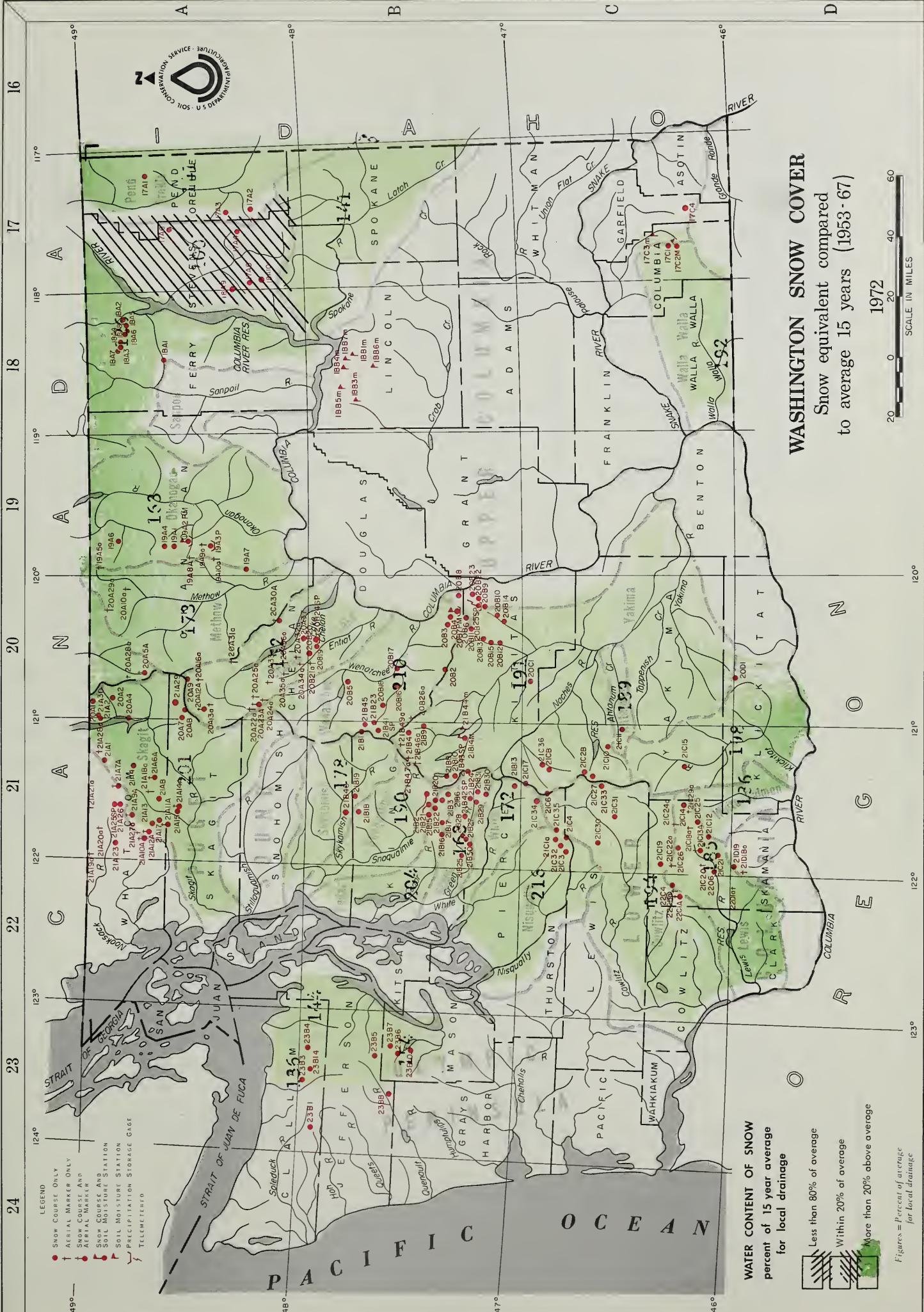
DIRECTOR
DEPARTMENT OF ECOLOGY
STATE OF WASHINGTON



Report prepared by

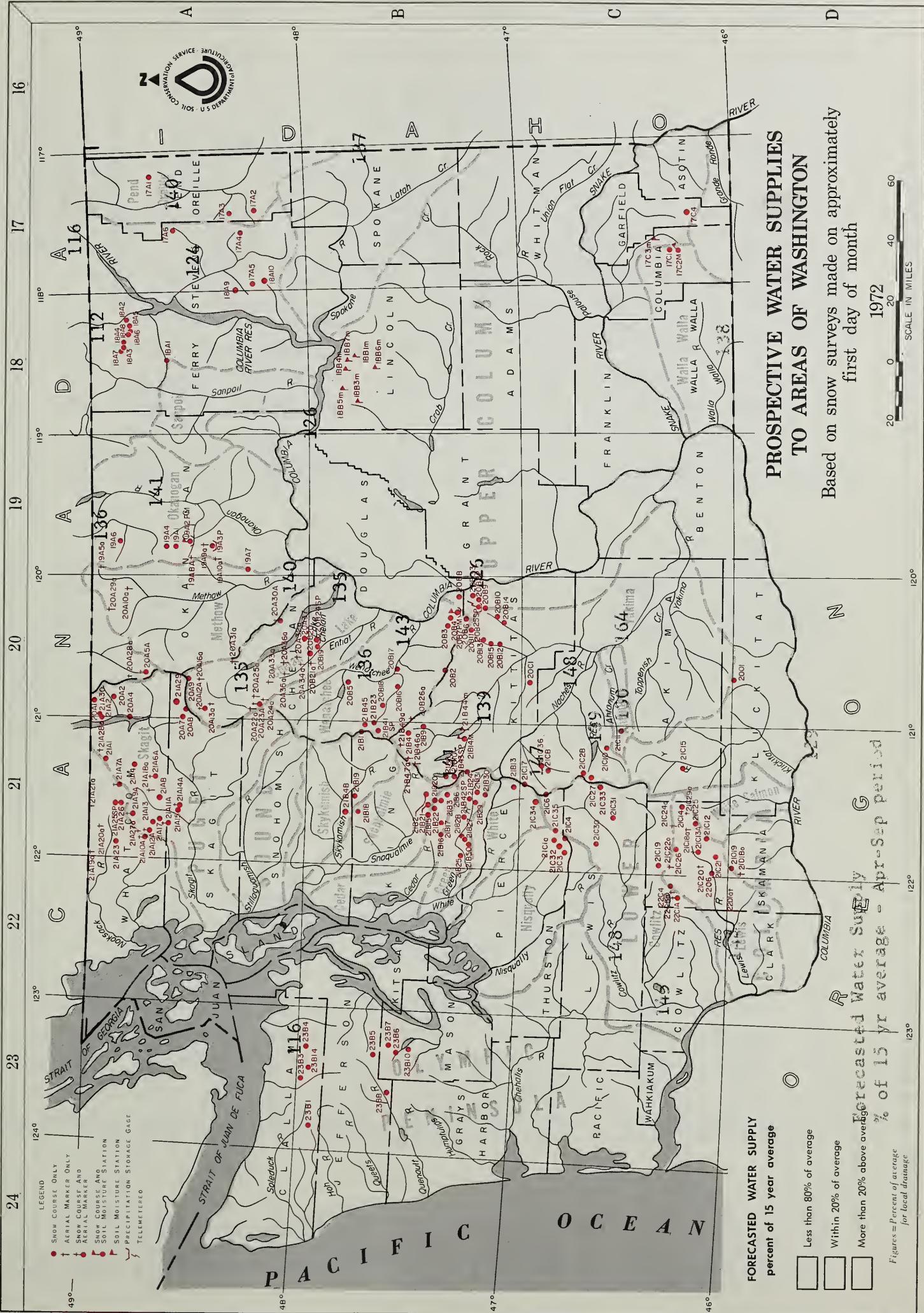
ROBERT T. DAVIS, Snow Survey Supervisor

SOIL CONSERVATION SERVICE
360 U.S. COURTHOUSE
SPOKANE, WASHINGTON 99201



INDEX to WASHINGTON SNOW COURSES, SOIL MOISTURE STATIONS and PRECIPITATION STORAGE GAGES

NUMBER SEC. TWP. RANGE ELEV.										NUMBER SEC. TWP. RANGE ELEV.										NUMBER SEC. TWP. RANGE ELEV.										NUMBER SEC. TWP. RANGE ELEV.				
UPPER COLUMBIA DRAINAGE					Colockum Creek					Lewis River (continued)					Skagit River					Baker River					Cowitz River					Nooksack River				
Pend Oreille River	17A2	7	31N	43E	5250	Colockum Creek, Upper	20B22	11	20N	20E	5300	Divide Meadow	21C29a	21	9N	10E	5600	Beaver Creek Trail	21A4	35	39N	12E	2200	Cowitz River	21A1	9	39N	12E	3680					
Boyer Mountain	17A1	24	37N	44E	5000	Colockum Creek, Lower	20B23	1	20N	20E	4300	Grand Meadow	21C25	28	8N	9E	3500	Beaver Pass	21A28a	26	40N	12E	6000	Brown Top	21C25	8	38N	12E	5900					
Bunchgrass Meadow	17A3	30	33N	43E	2970	Beehive Springs	20B3	12	21N	19E	4400	Lone Pine Shelter	22C5a	24	8N	5E	3200	Devils Park	20A4	34	38N	12E	3500	Marble Mountain	22C5a	24	8N	5E	3200					
Winchester Creek	Kettle River	17A3	30	33N	43E	2970	Scout-A-Vista	20B4	18	21N	20E	3400	New Muddy River	22C6	36	8N	6E	2000	Freezout Creek Trail	20A1	14	40N	14E	3500	Oldman Pass	21D19	22	40N	16E	5000				
Boulder Road	18A2	36	39N	36E	1450	Jump-Off	20B8	34	21N	20E	4450	Plains of Abraham	22C1a	35	9N	5E	4400	Freezeout Meadows	20A2	8	40N	16E	3500	Smith Creek Road	21A29	25	36N	16E	5000					
Butte Creek	18A3	28	39N	35E	4070	Scenit Slide	20B6	30	21N	20E	5000	Spencer Meadow	22C4	29	9N	6E	3400	Granite Creek	21A2	19	40N	14E	2600	Lake Hozonem	21C20a	16	BN	7E	3400					
Cabin Creek	18A8	5	38N	36E	3170	Upper Wheeler	20B7PM	30	21N	20E	4400	Meadows Cabins	21C15a	14	8E	4250	New Hozonem Lake	21A30	19	40N	14E	2800	Timbered Peak	21C24a	20	9N	9E	4200						
Goat Creek	18A5	3	38N	36E	3595	Snow Caps Creek	18A6	5	38N	36E	2720	Table Mountain	21D18a	36	6N	6E	3000	Thunder Basin	20A7	15	35N	14E	4200	Colockum-Kunz	18A1m	32	27N	34E	2440					
Snow Caps Trail	18A7	20	39N	35E	4600	Creston-Kunz	18A8m	21	27N	31E	2750	Cayuse Pass	21C6	15	16N	10E	5300	Jack Woods	21A27a	1	37N	7E	4900	Krause	18A8m	21	27N	31E	2750					
Summit G. S.	Colville River	17A6	19	36N	42E	5215	Sheffels	18B8m	17	27N	32E	2378	Moquito Meadows	21C19	33	10N	7E	4100	Dock Butte	21A11a	8	36N	8E	3800	Wheatridge	18A8m	21	27N	31E	2378				
Baird	18A9	34	38N	38E	2885	Sherman	18B7m	24	27N	33E	2340	Ohanapecosh	21C32	28	15N	10E	2200	Easy Pass	21A7a	17	38N	11E	5200	Watson Lakes	18B7m	24	27N	33E	2340					
Carlson	17A4	11	32N	41E	4925	Wheatridge	18B6m	24	25N	32E	2290	Packwood Lake	21C31	21	13N	10E	2870	Jasper Pass	21A17	17	38N	11E	5400	Willamette	18B6m	24	25N	32E	2290					
Chevalier	17A5	26	31N	38E	4990	Yokima River	21C11	26	12N	14E	3100	Pigtail Peak	21C14	36	10N	10E	4500	Komo Kulshan	21A9a	23	38N	8E	3600	Potato Hill	21C14	36	10N	10E	4500					
Stranger Mountain	18A10	6	29N	38E	3370	Ahtanum R. S.	21C10	2189	35	21N	14E	3200	Rocky Creek	21A18a	27	38N	10E	5800	Mount Blum	21A18a	27	38N	10E	5800	William Creek	21A10a	18	37N	8E	3400				
Togo	Sanpoil River	18A1	19	36N	35E	5350	Bumping Lake	21C8	23	16N	12E	3450	Schreibers Meadow	21A10a	18	37N	8E	2200	Colockum Pass	21C36	13	16N	12E	3400	Bumping Lake New	21C36	13	16N	12E	3400				
Sherman Creek Pass	Okanogan River	19A8a	2	36N	23E	7000	Domeny Flat	20B10	17	19N	20E	4123	Canyon	21A4a	20	36N	9E	4400	Bald Mountain	21A20a	20	40N	8E	5100	Grove Camp	20B11	29	19N	20E	4123				
Clark	Nuckanuck Creek	19A9a	20	36N	24E	6750	Fish Lake	21B44m	15	20N	14E	2200	Glacier Creek	21A3	21	37N	8E	1600	Three Mile Creek	21A15	18	36N	9E	1600	Green Lake	21C10	3	12N	13E	6000				
Mutton Creek No. 1	19A4	19	37N	24E	6000	Green Lake	21B14	34	24N	14E	3371	Panorama New	21A23	9-10	38N	7E	3700	Paradise Park (New)	21C3	29	15N	8E	2760	High Creek	20B11	34	20N	19E	5350					
Mutton Creek No. 2	19A4	20	36N	24E	4300	Grouse Camp	20B11	29	21N	19E	2089	Panorama Snow Pillow	21A4	23	15N	8E	4550	Corral Pass	21B14	23	15N	8E	5050	Holiday Creek	20B11	29	21N	19E	2089					
Payayzen	19A3P	18	35N	24E	4000	High Creek	21B46a	22	23N	12E	4624	Twin Lakes	21A21a	16	40N	9E	4500	Ghost Forest	21B14	23	15N	8E	5200	Joe Lake	21B46a	22	23N	12E	4624					
Rusty Creek	19A2Pm	33	37N	24E	4500	Van Epps Pass	20B26a	16	23N	15E	5925	Longmire	21B31	5	19N	11E	4700	Longmire Ridge	21B13	29	15N	8E	5000	Lemah Creek	21B13	5	19N	11E	4700					
Salmon Meadows	19A10a	15	35N	23E	6750	Walters Flat	20B15	22	20N	19E	3660	Paradise Park	21B10	21	20N	11E	5000	Manastash	21B13	6	16N	11E	5000	Waptus Lake	21B49a	12	23N	13E	3660					
Starvation Mtn.	19A10a	15	35N	23E	6300	White Pass (East Side)	21C28	2	13N	11E	4500	Stampede Pass	21B10	21	20N	11E	5000	Waptus Lake	21B49a	12	23N	13E	3660	White Pass (Leach Lake)	21C27	1	13N	11E	4500					
Tours Coulee	Methow River	19A7	36	34N	23E	4650	White Pass (Leach Lake)	21C27	1	13N	11E	4500	Airstrip	21B24	18	20N	11E	1800	Black and White Lakes	23B7	17	24N	5W	4200	Cloudy Pass	20A22a	12	31N	15E	2925				
Billy Goat Pass	20A10a	10	38N	20E	6400	Numanum	20B13	4	20N	19E	3875	Charley Creek	21B25	27	21N	8E	1200	Four Stream	23B14	29	28N	6W	5200	Trail Creek	20B14	20	20N	19E	3875					
Dollar Watch	20A29a	8	39N	20E	7000	Tunnel Avenue	21B8	13	21N	11E	3560	Cougar Mountain	21B2SP	21	20N	9E	3200	Home Sweet Home	23B5	28	25N	5W	5200	Van Epps Pass	20B14	20	20N	19E	3560					
Harris Pass	20A5A	7	37N	1B	6500	Van Epps Pass	20B26a	16	23N	15E	3730	Grass Mountain No. 2	21B27	14	20N	8E	2900	Sundown Pass	23B8	25	24N	7W	3900	Wapiti Pass	20B26a	16	23N	15E	3730					
Horseshoe Basin	19A5a	15	40N	23E	7000	Walters Flat	20B15	22	20N	19E	3660	Lester Creek	21B28	12	20N	8E	2100	Elwha River	23B3	36	29N	7W	4500	Wapiti Pass	20B15	22	20N	19E	3660					
Loup Loup	Cloudy Pass	19A7	36	34N	23E	4650	Waptus Lake	21B49a	12	23N	13E	3660	Lynn Lake	21B29	36	20N	8E	4000	Wapiti Pass	20B15	22	20N	19E	3660	White River Campground	21C34	4	16N	9E	6000				
Greenwood Flat	20A22a	12	31N	15E	6500	White Pass (East Side)	21C28	2	13N	11E	4500	Airstrip	21B30	18	19N	11E	4100	Deer Park	23B4	1	28N	5W	5200	White Pass (Leach Lake)	21C27	1	13N	11E	4500					
Lyman Lake	20A25a	3	31N	16E	3540	White Pass (Leach Lake)	21C27	1	13N	11E	4500	Charley Creek	21B25	27	21N	8E	1200	Black and White Lakes	23B7	17	24N	5W	4200	White Pass (Leach Lake)	21C27	1	13N	11E	4500					
Park Creek Flat	20A24a	8	31N	16E	5275	White Pass (Leach Lake)	21C27	1	13N	11E	4500	Cougar Mountain	21B27	14	20N	8E	2900	Black and White Lakes	23B7	17	24N	5W	4200	White Pass (Leach Lake)	21C27	1	13N	11E	4500					
Petersons	20A23a	18	31N	16E	5900	White Pass (Leach Lake)	21C27	1	13N	11E	4500	Grass Mountain No. 2	21B27	14	20N	8E	2900	Black and White Lakes	23B7	17	24N	5W	4200	White Pass (Leach Lake)	21C27	1	13N	11E	4500					
Rainy Pass	20A16a	3	34N	17E	3730	White Pass (Leach Lake)	21C27	1	13N	11E	4500	Lester Creek	21B28	12	20N	8E	2100	Black and White Lakes	23B7	17	24N	5W	4200	White Pass (Leach Lake)	21C27	1	13N	11E	4500					
Safety Harbor	20A9	21	35N	17E	4780	White Pass (Leach Lake)	21C27	1	13N	11E	4500	Lynn Lake	21B29	36	20N	8E	4000	Black and White Lakes	23B7	17	24N	5W	4200	White Pass (Leach Lake)	21C27	1	13N	11E	4500					
War Creek Pass	20A30a	32	31N	20E	6300	White Pass (Leach Lake)	21C27	10	28N	18E	5300	Sawmill Ridge	21B31	5	19N	11E	4700	Black and White Lakes	23B7	17	24N	5W	4200	White Pass (Leach Lake)	21C27	1	13N	11E	4500					
Entiat River	20B19	34	28N	19E	1600	Spruce Springs	17C4	9	8N	40E	5700	South Fork Cedar	21B3	10	21N	10E	2390	Black and White Lakes	23B7	17	24N	5W	4200	White Salmon River	21C12	55	7N	8E	4000					
Entiat Meadows	20A33a	2	29N	17E	3150	Mill Creek	21B18	2	21N	10E	4000	South Fork Cedar	21B2	31	22N	10E	3300	Black and White Lakes	23B7	17	24N	5W	4200	White Salmon River	21C12	55	7N	8E	4000					
Entiat River Trail	20B16	4	25N	17E	1810	Couse	17C3m	2	9N	35E	3370	City Cabin	21B3	10	21N	10E	2390	Black and White Lakes	23B7	17	24N	5W	4200	White Salmon River	21C12	55	7N	8E	4000					
Fox Camp	20A36a	17	30N	18E	6510	Homestead	17C1	11	9N	40E	4030	City Cabin	21B2	31	22N	10E	3300	Black and White Lakes	23B7	17	24N	5W	4200	White Salmon River	21C12	55	7N	8E	4000					
Pope Ridge	20B24SP	22	29N	18E	4300	Martin Springs (Helmers SM)	17C2m	23	9N	40E	4400	Mt																						



INDEX to WASHINGTON SNOW COURSES, SOIL MOISTURE STATIONS and PRECIPITATION STATIONS

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.	NAME	NUMBER	SEC.	TWP.	RANGE	LEV.	NAME									
UPPER COLUMBIA DRAINAGE																					
Pend Oreille River	Colockum Creek	Upper	20222	11	20N	20E	5300	Divide Meadow	21C29a	21	9N	10E	5600								
Boyer Mountain	Colockum Creek	Lower	20223	1	20N	20E	4300	Grand Meadow	21C25	28	8N	9E	3500								
Bunchgrass Meadow	Lone Pine Shelter							Marble Mountain	21C26	8	9N	7E	3800								
Winchester Creek	Squillchuck Creek							New Muddy River	22C5a	24	8N	SE	3200								
Kettle River	Beehive Springs		2083	12	21N	19E	4400	Oldman Pass	22C6	36	8N	6E	2000								
Boulder Road	Scout-A-Vista		2084	18	21N	20E	3400	Plains of Abraham	21D19	22	6N	7E	3100								
Butte Creek	Jump-Off		2088	34	21N	20E	4450	Smith Creek Road	22C1a	35	5N	SE	16E								
Cabin Creek	Semimt Slide		2086	30	21N	20E	5000	Spencer Meadow	22C1a	25	36N	16E	3500								
Goat Creek	Upper Wheeler		2087	30	21N	20E	4400	Surprise Lakes	22C2a	16	7N	8E	2100								
Show Caps Creek								Table Mountain	21C24a	14	7N	8E	2450								
Show Caps Trail								Timbered Peak	21D18a	36	6N	6E	3400								
Summit G. S.													3000								
Colville River	Crab Creek		1881m	32	27N	34E	2440	Lewis River (continued)													
Baird	Jack Woods		1883m	28	27N	31E	2750	Baker Pass	21C16	15	16N	10E	5300								
Carlson	Sheaffels		1884m	21	27N	32E	2420	Dock Butte	21C19	33	8N	8E	3800								
Gewelwha	Sherman		1885m	17	27N	32E	2378	Easy Pass	21C32	28	15N	10E	4100								
Stranger Mountain	Wheatridge		1886m	24	27N	32E	2290	Jasper Pass	21A6a	17	38N	11E	5200								
Togo								Komo Kulshan	21A17	31	37N	9E	800								
Sanpoil River	Yakima River		21C1L	26	12N	14E	3100	Marten Lake	21A9a	23	38N	8E	3600								
Sherman Creek Pass	Ahtanum R. S.		21B19	35	23N	14E	3200	Mount Blum	21A18a	27	38N	10E	5800								
Okanogan River	Big Boulder Creek		21C8	23	16N	12E	3450	Rocky Creek	21A12a	20	37N	8E	2100								
Clark	Bumping Lake		21C36	13	16N	12E	3400	Schreiber's Meadow	21A10a	18	37N	8E	3400								
Muckamuck Creek No. 1	Bumping Lake New		2089	25	20N	32E	3570	S. F. Thunder Creek	21A14a	20	36N	9E	2200								
Mutton Creek No. 2	Colockum Pass		20810	17	19N	20E	4123	Sulphur Creek	21A13	22	37N	8E	1600								
Putsayen Creek	Colockum Pass		20811	29	21N	19E	5355	Three Mile Creek	21A15	18	36N	9E	1600								
Rusty Creek	Green Lake		20812	34	20N	19E	2930	Watson Lakes	21A21a	16	40N	9E	4500								
Salmon Meadows	Grouse Camp		21C36	22	23N	12E	4624	PUGET SOUND DRAINAGE													
Starvation Mtn.	High Creek		20813	4	20N	19E	2089	Bald Mountain	21A19a	7	40N	7E	4400								
Touts Coulee	Joe Lake		20814	20	19N	20E	4123	Canyon	21A20a	20	40N	8E	5100								
Methow River	Lake Cle Elum		20814m	15	20N	14E	2300	Glacier Creek	21A23	9-10	38N	7E	3700								
Billy Goat Pass	Lake Creek		20814	7	23N	13E	3327	Panorama	21A26	17	39N	9E	4300								
Dollar Watch	Lake Cle Elum		20815	24	17N	16E	3935	Panorama New	21A25SP	17	39N	9E	4300								
Harts Pass	Lake Creek		20815	6	16N	11E	5400	Twin Lakes	21A21a	16	40N	9E	5200								
Horsehoe Basin	Manastash		20816	4	20N	19E	3500	OLYMPIC PENINSULA													
Loup Loup	Morse Lake		20817	4	19N	20E	3560	Dungeness River	21B19a	7	40N	7E	4400								
Cloudy Pass	Nanum		20818	13	20N	19E	3875	Morse Creek	21B14	29	28N	6W	5200								
Greenwood Flat	Trail Creek		20819	20	19N	20E	3560	Dungeness River													
Little Meadows	Tunnel Avenue		20820	13	20N	19E	3875	Deer Park	21B12	18	20N	11E	6000								
Lyman Lake	Van Epps Pass		20821	16	23N	11E	5250	Elwha River													
Park Creek Flat	Walters Flat		20822	22	20N	19E	3500	Green River	21B12	27	21N	BE	1800								
Park Creek Ridge	Wapiti Lake		20823	2	13N	11E	4500	Elwha River													
Rainy Pass	White Pass (East Side)		21B13	12	23N	13E	3024	Cox Valley	21B25	27	21N	BE	1200								
Safety Harbor	White Pass (Leach Lake)		21B14	2	13N	11E	4500	Green River													
War Creek Pass			21C27	1	13N	11E	4500	Skokomish River													
Chelan Lake Basin	Asotin Creek		12	31N	15E	6500	Airstrip	21B25	18	20N	11E	3000									
Cloudy Pass	Asotin Creek		20A25a	3	31N	16E	3540	Charley Creek	21B25	27	21N	BE	1800								
Greenwood Flat	Coastal Mountain No. 2		20A24a	8	31N	16E	5275	Cougar Mountain	21B27	14	20N	8E	2900								
Little Meadows	Grass Mountain No. 3		20A23a	1B	31N	16E	5900	Green River													
Lyman Lake	Lester Creek		20A23a	1B	31N	16E	2200	Green River													
Park Creek Flat	Lynm Lake		20A12a	7	34N	16E	4600	Green River													
Park Creek Ridge	Sawmill Ridge		20A16a	3	34N	17E	3730	Green River													
Rainy Pass	Snow Butte		20A19	21	35N	17E	4780	Green River													
Safety Harbor	Stampede Pass		20A30a	15	35N	20E	6300	Green River													
Tommy Creek	Twin Camp		20A31a	34	33N	18E	6500	Green River													
Entiat River	Asotin Creek		20B19	34	28N	19E	1600	Lower Columbia Drainage													
Brief	Spruce Springs		20A33a	28	31N	17E	4800	Lower Columbia Drainage													
Entiat Meadows	Mill Creek		20A34a	2	29N	17E	3150	Lower Columbia Drainage													
Entiat River Trail	Homestead		20A35a	1B	30N	18E	6510	Lower Columbia Drainage													
Fox Camp	Martin Springs (Helmers Sh.)		20B24SP	22	29N	18E	4300	Lower Columbia Drainage													
Pope Ridge	Blue Lake		20A32a	34	30N	18E	4600	Lower Columbia Drainage													
Pugh Ridge	Blue Lake		20A37	20	29N	19E	6200	Lower Columbia Drainage													
Shady Pass	Satus Pass		20A35a	21	30N	17E	3850	Lower Columbia Drainage													
Leavenworth R. S.	West Fork Cabin		20B21a	10	28N	18E	5300	Lower Columbia Drainage													
Merritt	Blue Lake		21B1	14	26N	13E	4070	Lower Columbia Drainage													
Stevens Pass	Bob's Trail		21B4	12	26N	19E	3700	Lower Columbia Drainage													
Stevens Pass Sand Shed	Canalinity Ridge		20B25SP	10	20N	20E	5310	Lower Columbia Drainage													
Berne-Mill Creek (New)	White Salmon River		21B23	7	26N	14E	3240	White Salmon River													
Blewett Pass No. 2	Cultus Creek		20B2	35	22N	17E	4270	White Salmon River													
Chiwaukum G. S.	Mill Creek		20B16	4	25N	17E	1810	White Salmon River													
Lake Wenatchee	Lewis River		20B5	33	22N	17E	1970	White Salmon River													
Leavenworth R. S.	White Salmon River		20B17	1	24N	17E	1127	White Salmon River													
Merritt	White Salmon River		21B1	14	26N	13E	4070</														

WATER SUPPLY OUTLOOK

State of Washington
March 1, 1972

*
* Record or near record streamflows are forecasted for the State *
* of Washington and tributary streams during the 1972 runoff *
* period. Flows are anticipated to reach volumes which were *
* only exceeded one or two times, in most cases, in the history *
* of the river gaging record. Even the flow at The Dalles, Ore- *
* gon, is forecasted to be exceeded only by the giant flows *
* which occurred in 1894. Of course, these flows are based on *
* the fact that normal conditions will exist throughout the to- *
* tal runoff season. Drying winds could reduce the snowpacks *
* immensely and reduce the resultant runoff while a wet spring *
* together with above-normal temperatures could result in peak *
* flows in excess of anything seen. The snowpacks are well a- *
* bove normal with only one drainage in the total State of Wash- *
* ington indicating normal snowpacks and this watershed has a *
* short record of snow courses. The range of snow cover is *
* from normal on the Colville River to a high of 116% greater *
* than normal on the Nisqually. Much of this snowcover can be *
* found at the lower elevations which normally tends to come off *
* early in the season thereby sustaining streamflows from early *
* runoff through the summer months. This low-elevation snowpack *
* has a tendency to flash off early causing much local damage. *
* Many of these snow courses were measured late in March and a *
* few were not obtained at all. This was the result of the heavy *
* storm period that existed over the mountains during the latter *
* part of February and the first week of March. These storms *
* put down a great deal of snow at higher elevations and rain at *
* the valley stations. If this condition continues throughout *
* the rest of March many streams will go out of their banks *
* early in the runoff season and stay high throughout the runoff *
* period.
*

* Precipitation has been above normal throughout the winter sea- *
* son at all valley stations with the exception of the northeast *
* section of Washington. This above-normal precipitation con- *
* tinues with February reporting as high as 126% greater than *
* normal rainfall in the central area.
*

* The reservoir storage has little meaning in a high-water situ- *
* ation that is in existence now because reservoir managers are *
* attempting to lower their reservoirs for flood control purpos- *
* es yet maintain flows below the reservoirs at flood stage or *
* lower. For example, the Yakima drainage has high reservoir *
* storage as of March 1 but these reservoirs cannot now be *
* brought down due to the high uncontrolled inflow below the *
* reservoirs.
*

* Flows during the month were generally above normal with only *
* the Columbia at Birchbank and the Similkameen near Nighthawk *
* reporting below normal runoffs.
* * * * *

SNOW COVER

As stated above, the Colville watershed has a snowpack that is less than was measured the last two years and exactly normal. The Kettle River to the north, also, has a snowpack that is low in comparison to others in the state but its snow cover is 26% greater than normal. The range of snow cover for the Upper Columbia basin in Washington varies from this normal previously mentioned to 110% greater than normal for the Wenatchee River. The range on the Lower Columbia is from 85% above normal on the Lewis River to 98% above on the Klickitat. The Puget Sound drainage varies from 63% above normal on the Green River to a 116% greater for the Nisqually. On the Olympic Peninsula the range is from 36% above normal to 54% above.

RESERVOIRS

Only Franklin D. Roosevelt Lake, Chelan, and Ross Reservoir have less than normal amounts of water in storage as of March 1. All other reservoirs have more water in storage and one, Coeur d'Alene Lake, has greater than its capacity as of March 1. This is a result of the restricted outflow of Coeur d'Alene Lake.

PRECIPITATION

During the month of February the National Weather Service reported precipitation in the Columbia portion of Canada to be 56% greater than normal; 55% greater on the Pend Oreille-Spokane; 34% less in the northeastern area; 50% greater in the southeast; 126% greater in the central; 81% greater in the northcentral; and on the northwest slopes of the Cascades 90% greater. The southwest slopes of the Cascades had rainfall that was 55% greater than normal. These February precipitation figures are similar to the seasonal total from November through February only not as dramatic, percentagewise.

SOIL MOISTURE

The two soil moisture stations in the Yakima drainage are not measured due to the continued inoperation of the soil moisture meter. The other stations in the state report the soil to be wetted similar to what occurred during the last two years. Some stations have reported more moisture and some less but a similar situation on the average.

STREAMFLOW

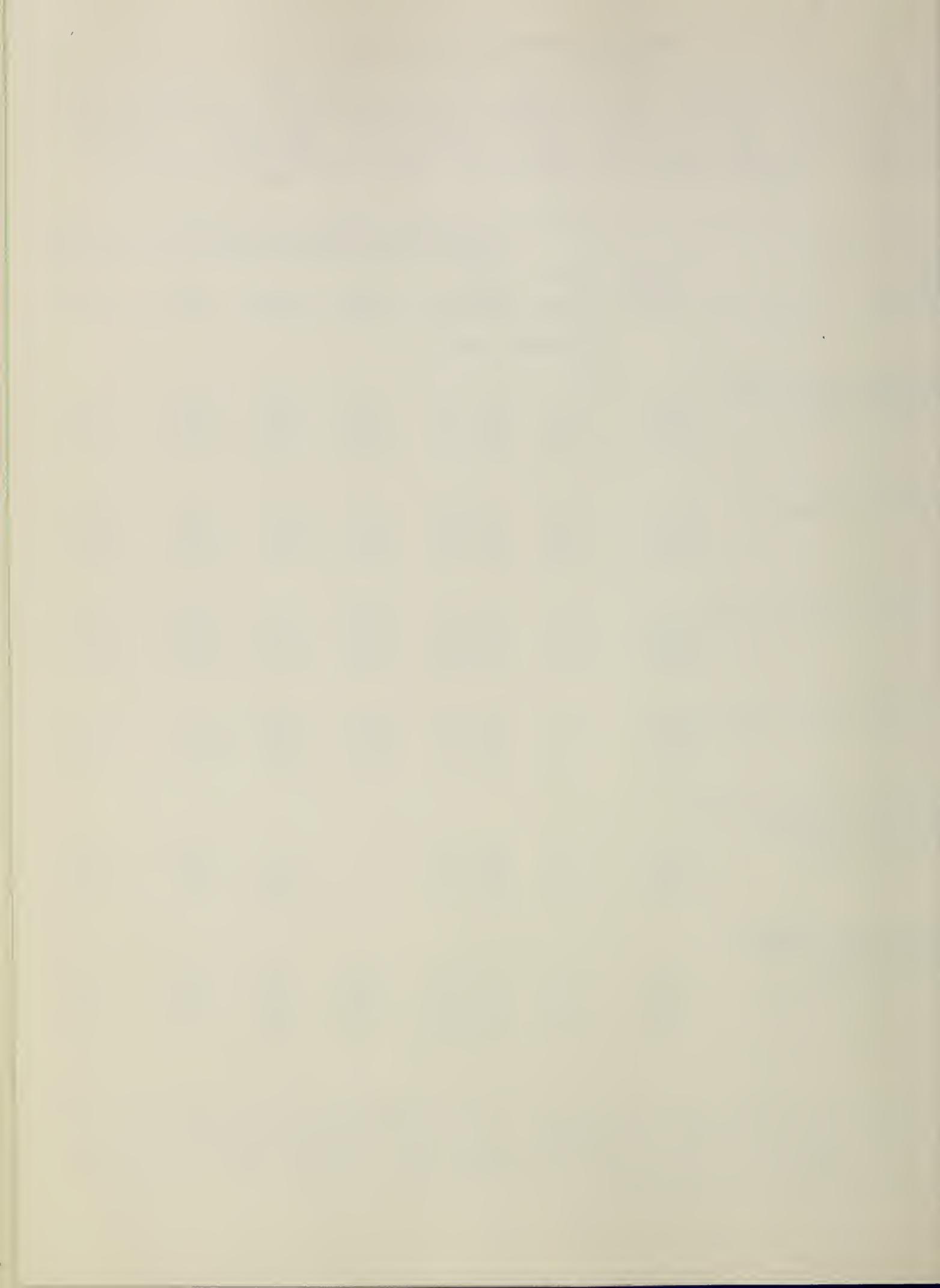
As stated above, all streams were reported to have above-normal runoff during February with the exception of Columbia at Birchbank and the Similkameen River. This is the result of above-normal precipitation previously mentioned. Much of the low-elevation snowpack is still on the ground with only that occurring at very low elevations running off. The forecasts of streamflows range from 12% above normal for the Kettle River near Laurier to a high of 64% above normal for the Yakima at Parker. Many of these forecasted flows, as mentioned previously, are for record amounts and most are for second and third highest of record. Numerical forecasts can be found elsewhere in this report.

STREAMFLOW FORECASTS - MARCH 1972

The following summarized runoff forecasts are based principally on mountain snow cover and on the assumption that precipitation and temperature will be near average from the present time to the end of the forecast period. Appreciable deviations from normal of temperature and/or precipitation will correspondingly modify these forecasts. Streamflow figures for 1972 are preliminary and subject to revision.

Basin, Stream and Station	Forecast Runoff 1972	% Avg.	Fore- cast Period	Seasonal Streamflow in Thousands of Acre-Feet			15-Yr Average 1953-67				
				1971	1970	1969					
COLUMBIA BASIN											
Columbia River System											
Columbia River at Birchbank 1/	53800 44200 32450	116 118 120	Apr-Sep Apr-Jul Apr-Jun	48592 39462 29759	34553 27931 20952	48001 40567 32193	46368 37480 27040				
Columbia River at Grand Coulee 1/	87400 75400 59200	126 128 129	Apr-Sep Apr-Jul Apr-Jun	75360 64444 51550	54617 46563 37574	74617 65587 54513	69458 58899 45889				
Columbia River bl. Rock Island Dam 1/	96350 81800 65500	126 126 130	Apr-Sep Apr-Jul Apr-Jun	84965 73096 58245	58544 50236 40675	79675 70515 58851	76241 64777 50387				
Columbia River at The Dalles, OR 1/	135500 117100 95580	129 130 132	Apr-Sep Apr-Jul Apr-Jun	123427 107702 88936	88146 76054 62847	112281 100113 85657	105176 90050 72410				
Pend Oreille River System											
Pend Oreille River bl. Box Canyon	22450 20700 17850	140 140 140	Apr-Sep Apr-Jul Apr-Jun		14737 13676 11985	16166 15055 13033	16030 14788 12754				
Kettle River System											
Kettle River nr. Laurier	2150 2040 1860	112 112 113	Apr-Sep Apr-Jul Apr-Jun	2110 2065 1814	1099 1068 1004	2239 2188 2048	1918 1821 1644				

1/ Observed flow corrected for storage in any of the following reservoirs which are above the station: Kootenay Lake, Hungry Horse, Flathead Lake, Pend Oreille Lake, F. R. Roosevelt Lake, Lake Chelan, Coeur d'Alene Lake, Brownlee, Noxon Reservoir and pumpage at F. D. Roosevelt Lake.



Streamflow Forecasts - March 1972 (Cont.)

Basin, Stream and Station	Forecast Runoff 1972	% 15-Yr. Avg.	Seasonal Streamflow in Thousands of Acre-Feet				15-Yr Average 1953-67
			Fore- cast Period	1971	1970	1969	
<u>Kettle River System (Cont.)</u>							
Colville River at Kettle Falls	190	124	Apr-Sep	94	270	153	
	175	125	Apr-Jul	86	256	141	
	165	126	Apr-Jun	80	240	131	
<u>Spokane River System *</u>							
Spokane River at Post Falls ID 2/	4300	137	Apr-Sep		3552	3151	
	4200	137	Apr-Jul		3463	3055	
	4000	137	Apr-Jun		3350	2913	
<u>Okanogan River System**</u>							
Similkameen River nr. Nighthawk	2070	136	Apr-Sep	1924	850	1199	1525
	1950	138	Apr-Jul	1827	808	1150	1419
	1670	140	Apr-Jun	1552	739	1052	1197
Okanogan River nr. Tonasket	2455	141	Apr-Sep	2236	923	1448	1738
	2270	144	Apr-Jul	2080	864	1353	1578
	1920	146	Apr-Jun	1769	785	1231	1318
<u>Methow River System***</u>							
Methow River nr. Pateros	1480	140	Apr-Sep	622	1060	1054	
	1380	141	Apr-Jul	587	1013	981	
	1200	144	Apr-Jun	532	948	834	
<u>Chelan River System</u>							
Chelan River at Chelan 3/	1710	135	Apr-Sep	1559	905	1337	1266
	1540	138	Apr-Jul	1363	816	1230	1119
	1230	141	Apr-Jun	1009	683	1093	870
Stehekin River at Stehekin	1220	135	Apr-Sep	678	961	904	
	1050	136	Apr-Jul	589	853	772	
	820	140	Apr-Jun	478	748	586	
Entiat nr. Ardenvoir	260	--	Apr-Sep	160	265	--	
	240	--	Apr-Jul	148	249	--	
	200	--	Apr-Jun	129	227	--	

* Forecasts made by J. Alden Wilson, Soil Conservation Service, Boise, Idaho.

** These forecasts are based in part upon base flow data especially prepared and furnished for this purpose by the U. S. Geological Survey.

2/ Observed flow corrected for storage in Coeur d'Alene Lake and diversions by Spokane Valley Farms Company and Rathdrum Prairie Canals.

3/ Observed flow corrected for storage in Lake Chelan.

Streamflow Forecasts - March 1972 (Cont.)

Basin, Stream and Station	Forecast Runoff 1972	% Avg.	Seasonal Streamflow in Thousands of Acre-Feet				15-Yr. Average 1953-67
			Fore- cast Period	1971	1970	1969	
<u>Wenatchee River System</u>							
Wenatchee River at Plain	1810	136	Apr-Sep	1019	1443	1333	
	1660	138	Apr-Jul	941	1349	1204	
	1350	142	Apr-Jun	804	1217	952	
Wenatchee River at Peshastin	2590	143	Apr-Sep	2364	1416	1953	1814
	2360	143	Apr-Jul	2036	1318	1840	1651
	1880	143	Apr-Jun	1483	1132	1669	1316
Ste milt Basin nr. Wenatchee	157*		May-Sep			145*	
<u>Yakima River System</u>							
Yakima River nr. Martin 4/	205	141	Apr-Sep	195	131	156	145
	192	143	Apr-Jul	182	123	144	134
	173	149	Apr-Jun	142	114	136	116
Yakima River at Cle Elum 5/	1350	139	Apr-Sep		866	1051	968
	1260	142	Apr-Jul		803	977	885
	1100	144	Apr-Jun		723	912	762
Yakima River nr. Parker 6/	2850	164	Apr-Sep	1491	1989	1738	
	2800	163	Apr-Jul		1512	2005	1722
	2550	161	Apr-Jun		1461	1980	1583
Kachess River nr. Easton 7/	185	144	Apr-Sep	173	115	139	128
	177	145	Apr-Jul	164	112	134	122
	158	148	Apr-Jun	131	104	128	107
Cle Elum River nr. Roslyn 8/	650	134	Apr-Sep	626	435	496	485
	600	135	Apr-Jul	567	402	473	445
	520	139	Apr-Jun	433	350	440	373
Bumping River nr. Nile 9/	220	147	Apr-Sep	187	129	150	150
	205	149	Apr-Jul	168	122	142	138
	170	149	Apr-Jun	118	107	133	114

* Thousands of Miners' inches.

4/ Observed flow corrected for storage in Lake Keechelus.

5/ Observed flow corrected for storage in Keechelus, Kachess and Cle Elum Lakes and diversion by Kittitas Canal.

6/ Observed flow corrected for storage in Keechelus, Kachess, Cle Elum, Bumping and Rimrock Lakes and diversions by Roza, Union Gap, New Reservation, Old Reservation and Sunnyside Canals.

7/ Observed flow corrected for storage in Lake Kachess.

8/ Observed flow corrected for storage in Lake Cle Elum.

9/ Observed flow corrected for storage in Bumping Lake.

Streamflow Forecasts - March 1972 (Cont.)

Basin, Stream and Station	Forecast Runoff 1972	%	Seasonal Streamflow in Thousands of Acre-Feet				15-Yr. Average 1953-67
			15-Yr. Avg.	Fore- cast Period	1971	1970	

Yakima River System (Cont.)

American River	190	147	Apr-Sep		128	138	129
nr. Nile	177	148	Apr-Jul		120	130	120
	147	148	Apr-Jun		106	120	99
Tieton River							
at Tieton Dam <u>10/</u>	350	139	Apr-Sep	323	244	273	251
	307	143	Apr-Jul	268	207	244	215
	250	145	Apr-Jun	197	172	220	172
Naches River							
nr. Naches <u>11/</u>	1330	148	Apr-Sep		841	994	899
	1230	150	Apr-Jul		779	926	819
	1060	152	Apr-Jun		694	857	698
Ahtanum Creeks							
nr. Tampico <u>12/</u>	64	130	Apr-Sep		43	57	49
	60	133	Apr-Jul		39	53	45
	55	138	Apr-Jun		35	49	40

Lower Columbia River System

Mill Creek							
nr. Walla Walla	40	138	Apr-Sep		27	32	29
	36	144	Apr-Jul		23	29	25
	34	148	Apr-Jun		21	27	23
Lewis River							
at Ariel <u>13/</u>	1950	144	Apr-Sep		914	1613	1358
	1770	148	Apr-Jul		798	1431	1197
	1570	148	Apr-Jun		723	1303	1059
Cowlitz blw.							
Mayfield Dam	3200	148	Apr-Sep		1615	2230	2160
	2840	149	Apr-Jul		1425	2002	1908
	2420	150	Apr-Jun		1245	1802	1612
Cowlitz River							
at Castle Rock <u>14/</u>	4100	145	Apr-Sep		2134	2965	2818
	3680	148	Apr-Jul		1873	2641	2487
	3030	143	Apr-Jun		1652	2359	2119

OLYMPIC PENINSULA

Dungeness River System

Dungeness River							
nr. Sequim	200	116	Apr-Sep		136	195	172
	165	117	Apr-Jul		115	167	141
	125	119	Apr-Jun		89	139	105

10/ Observed flow corrected for storage in Rimrock Lake.

11/ Observed flow corrected for storage in Bumping and Rimrock Lakes and diversions by Tieton, Selah Valley, Wapatox Canals and City of Yakima.

12/ Observed flow of North and South Forks (combined).

13/ Observed flow corrected for storage in Lake Merwin, Yale and Swift Reservoirs.

14/ Observed flow corrected for storage in Mayfield Reservoir.

COMPARISON OF SNOW COVER WITH THAT OF PREVIOUS YEARS

The following tabulation of Washington stream basins presents the water content of the snow about March 1, 1972, as per cent of the same date in 1971 and 1970 and average of record.

Tributary Basin	No. of Courses Average	Years of Record	1972 Snow Water Expressed as per cent of		
			1971	1970	1953-67
<u>UPPER COLUMBIA BASIN</u>					
Pend Oreille	13 - 15	8 - 35	119	150	141*
Kettle	12	6 - 32	104	141	126*
Colville	5	10 - 13	98	96	100*
Spokane	5 - 6	15 - 35	134	158	141*
Okanogan	28 - 30	5 - 34	138	183	163*
Methow	6 - 8	9 - 34	120	162	173*
Chelan	5	18	115	204	152*
Entiat	8	5 - 11	129	168	165*
Wenatchee	9 - 10	4 - 27	140	157	210*
Yakima	22	4 - 50	159	145	191*
Ahtanum	2	30	142	120	189*
<u>LOWER COLUMBIA</u>					
Mill Creek	3	7 - 22	234	215	192*
Klickitat	1	14	112	123	198*
White Salmon	2	28	112	200	186*
Lewis	16 - 17	9 - 14	112	297	185*
Cowlitz	10	8 - 20	125	233	194*
<u>PUGET SOUND</u>					
Nisqually	4	6 - 15	128	302	216*
White	2	20	122	190	172*
Green	5 - 9	10 - 25	132	239	163*
Cedar	6	11 - 13	278	307	204*
Snoqualmie	2 - 4	3	162	208	190*
Skykomish	2 - 3	4 - 27	119	169	178*
Skagit	9 - 11	14 - 24	137	280	201*
Nooksack	1 - 2	2 - 4	121	247	--
<u>OLYMPIC PENINSULA</u>					
Skokomish	3 - 4	8 - 14	103	210	154*
Elwha	1	12	129	208	136*
Dungeness	1	18	138	176	144*

* Records of less than 15 years used on computation of average

RESERVOIR STORAGE - 1000 Acre Feet

BASIN or STREAM	RESERVOIR	USABLE 1/ CAPACITY	Measured (March)			
			1972	1971	1970	Normal*
<u>COLUMBIA</u>						
Spokane	Coeur d'Alene Lake	225.1	248.0	154.2	148.1	149.4
Columbia	Franklin D. Roosevelt Lake	5232.0	2735.6	4666.2	3464.7	2985.2
Columbia	Banks Lake	761.8	714.9	712.2	605.4	511.7
Okanogan	Conconully Reservoir	13.0	9.6	5.8	7.4	6.1
Okanogan	Salmon Lake	10.5	8.6	2.1	7.6	8.5
Chelan	Lake Chelan	676.1	126.5	257.0	96.7	243.7
<u>YAKIMA</u>						
Yakima	Keechelus Lake	157.8	151.9	123.0	59.6	99.0
Kachess	Kachess Lake	239.0	179.0	201.1	169.6	178.5
Cle Elum	Lake Cle Elum	436.9	312.1	231.3	171.8	266.0
Bumping	Bumping Lake	33.7	9.2	5.2	7.2	11.0
Tieton	Rimrock Lake	198.0	139.6	122.9	89.0	124.1
<u>PUGET SOUND</u>						
Skagit	Ross Reservoir	1202.9	680.1	912.7	725.1	851.6
Skagit	Diable Reservoir	90.6	83.8	83.4	85.3	85.9
Skagit	Gorge Reservoir	9.8	7.3	8.3	8.3	--

1/ Based on Active Storage

* 15-year average 1953-67

SOIL MOISTURE - MARCH

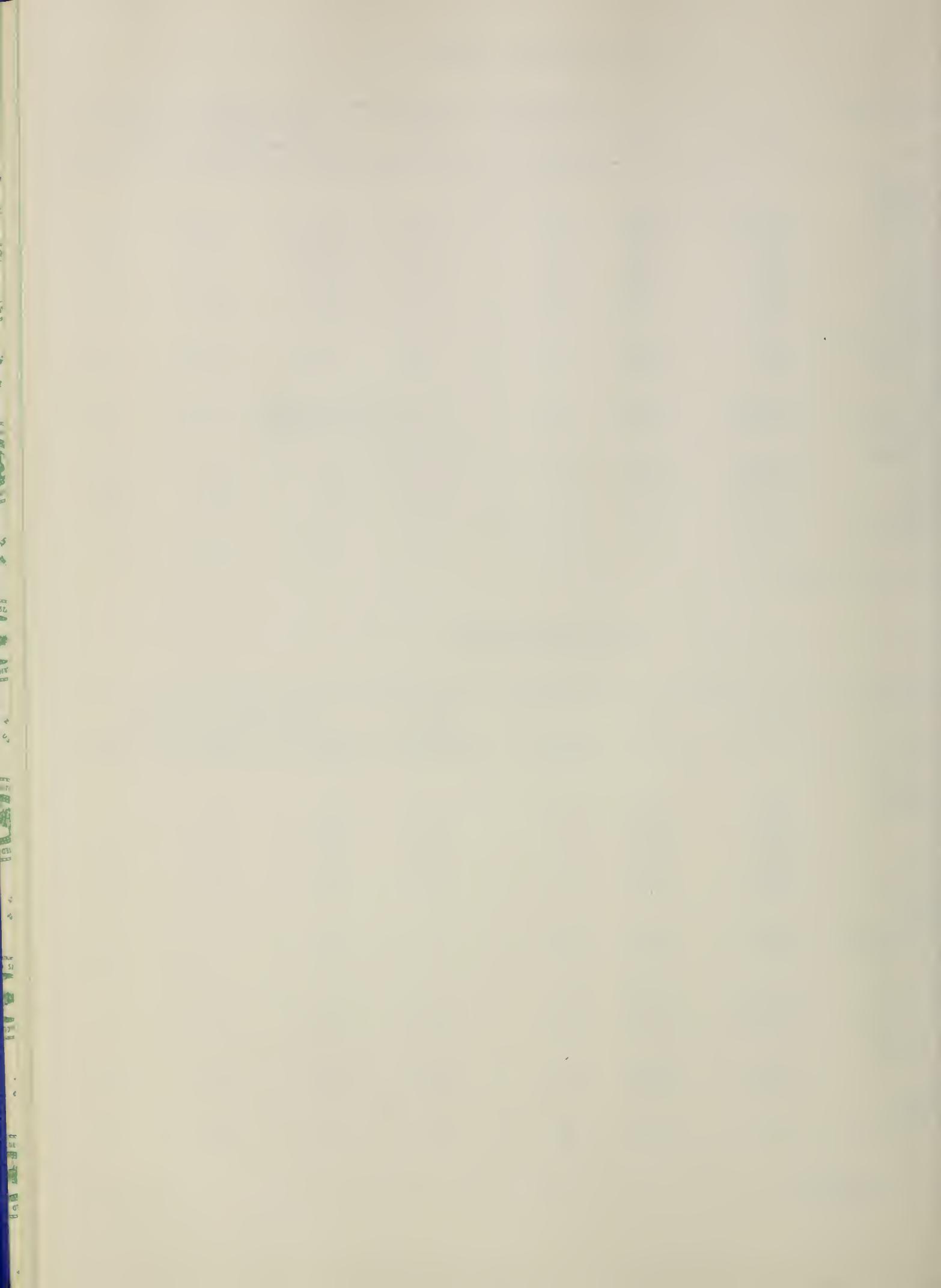
Drainage Basin and Station	Number	Elev.	Profile	(Inches) :	Soil Moisture Content		
			Depth	Total : Capacity : 1972	(Inches) as of Mar. 1 1971	1970	
<u>CRAB CREEK</u>							
Jack Woods	18B3m	2750	48	13.6	8.1	9.8	9.4
Krause	18B4m	2420	48	13.6	7.0	6.2	9.0
Sheffels	18B5m	2380	48	13.6	8.8	7.7	8.4
Sherman	18B7m	2440	48	13.6	7.4	7.8	8.9
Wheatridge	18B6m	2290	48	13.6	8.7	10.5	9.8
<u>OKANOGAN</u>							
Salmon Meadows	19A2M	4500	48	5.4	3.6	3.6	2.4
Trout Creek	3-M	3600	48	7.3	4.0*	3.2*	3.3*
<u>YAKIMA</u>							
Domery Flat	21B20m	2200	48	6.9	Not Measured	5.0	6.0
Lake Cle Elum	21B14M	2200	48	12.8	Not Measured	9.2	9.2
<u>WALLA WALLA</u>							
Couse	17C3m	3650	48	11.1	10.8	10.1	10.5
Helmers	17C2M	4400	48	12.0	11.6	10.7	10.9
<u>WENATCHEE</u>							
Upper Wheeler	20B7M	4400	48	12.7	10.0	10.1	7.1

* Feb 1 measurement

FALL SOIL MOISTURE

Drainage Basin and Station	Number	Elev.	Profile	(Inches) :	Soil Moisture Content		
			Depth	Total : Capacity : 1971	(Inches) as of Oct. 1 1970	1969	
<u>CRAB CREEK</u>							
Jack Woods	18B3m	2750	48	13.6	5.3	7.0	7.5
Krause	18B4m	2420	48	13.6	5.0	4.4	5.9
Sheffels	18B5m	2380	48	13.6	5.3	4.4	4.5
Sherman	18B7m	2440	48	13.6	4.0	3.8	4.2
Wheatridge	18B6m	2290	48	13.6	5.5	7.8	5.4
<u>OKANOGAN</u>							
Salmon Meadows	19A2M	4500	48	5.4	2.7	1.7	2.7
Trout Creek	3-M	3600	48	7.3	3.3	3.4*	3.8*
<u>YAKIMA</u>							
Domery Flat	21B20m	2200	48	6.9	2.1	2.4	--
Lake Cle Elum	21B14M	2200	48	12.8	7.1	7.6	--
<u>WALLA WALLA</u>							
Couse	17C3m	3650	48	11.1	6.2	5.9	6.1
Helmers	17C2M	4400	48	12.0	8.2	7.3	7.1
<u>WENATCHEE</u>							
Upper Wheeler	20B7M	4400	48	12.7	6.5	5.1	9.8

* Nov 1 measurement



PRECIPITATION 1/

Division Averages and Departures

Drainage Divisions	Sep - Oct	1971 ^{2/}	Nov - 1971 - Feb - 1972 ^{2/}	
	Average	Departure	Average	Departure
Columbia in Canada	4.45	+ 0.56	15.24	+ 4.05
Pend Oreille - Spokane	4.63	+ 0.48	18.48	+ 3.00
Northeastern Washington	3.16	+ 0.91	8.33	- 1.12
Southeastern Washington	3.73	+ 1.08	12.06	+ 1.72
Central Washington	4.15	- 0.29	34.07	+10.39
North Central Washington	1.99	+ 0.58	8.26	+ 2.72
Northwest Slope Cascades	11.60	- 0.07	55.49	+10.98
Southwest Slope Cascades	9.33	+ 1.61	45.41	+10.92

Northeastern Washington	- Lower Spokane, Colville, Sanpoil and lower Kettle drainages.
Southeastern Washington	- Touchet, Tucannon and Palouse drainages.
Central Washington	- Yakima, Wenatchee and Chelan drainages.
North Central Washington	- Methow and Okanogan drainages.
Northwest Slope Cascades	- Puget Sound drainages.
Southwest Slope Cascades	- Lower Columbia drainages.

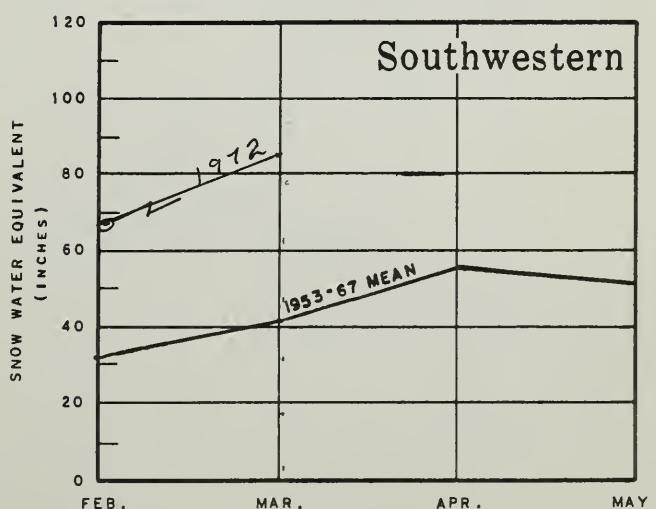
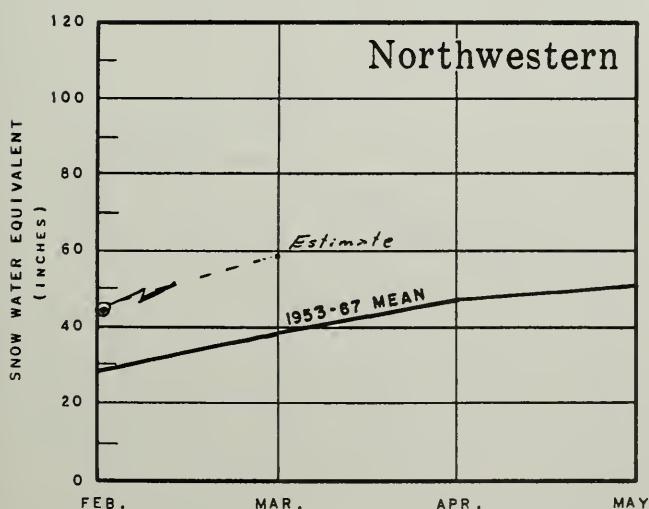
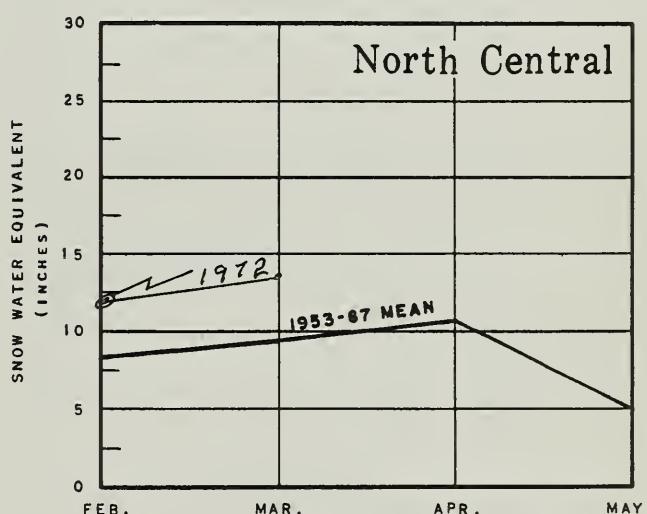
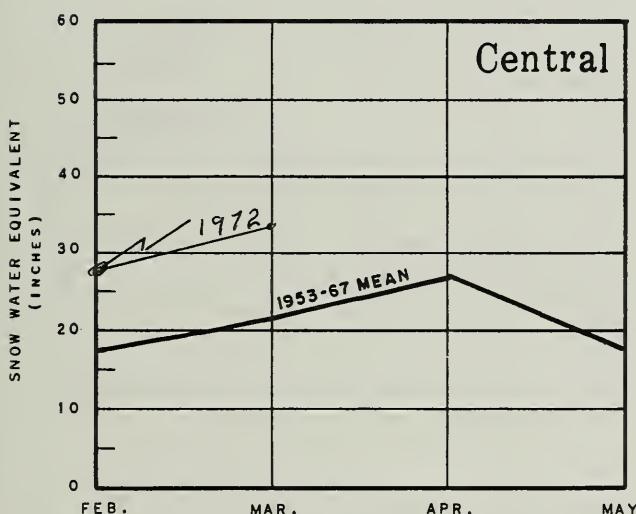
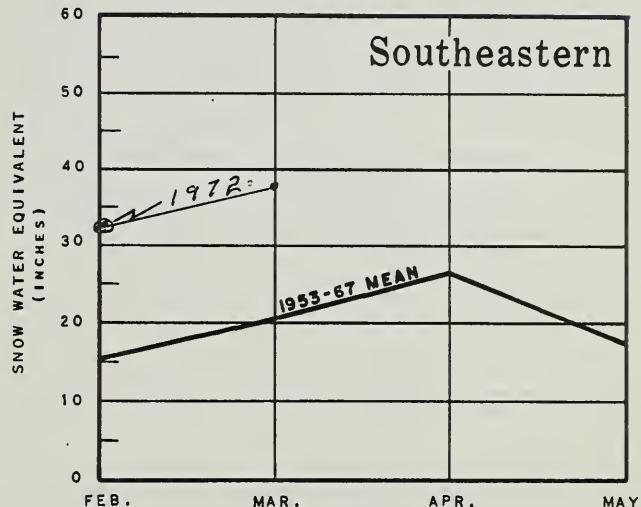
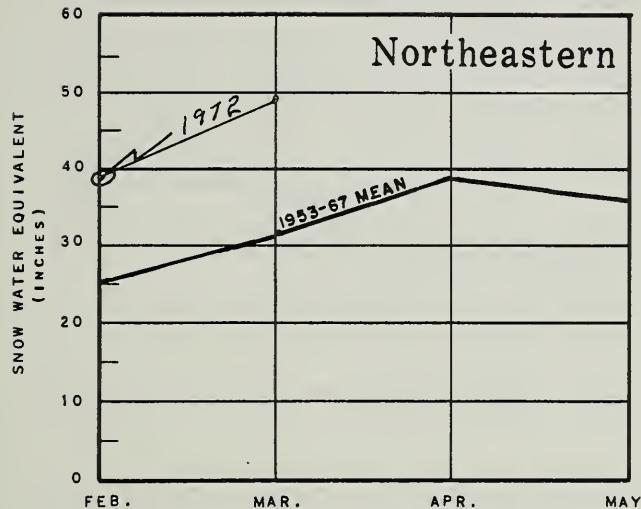
1/ - Preliminary analysis by National Weather Service from data furnished by Meteorological Services of Canada and National Weather Service.

2/ - Departure from 15-year (1953-67) drainage division average.

WASHINGTON SNOW COVER

1972

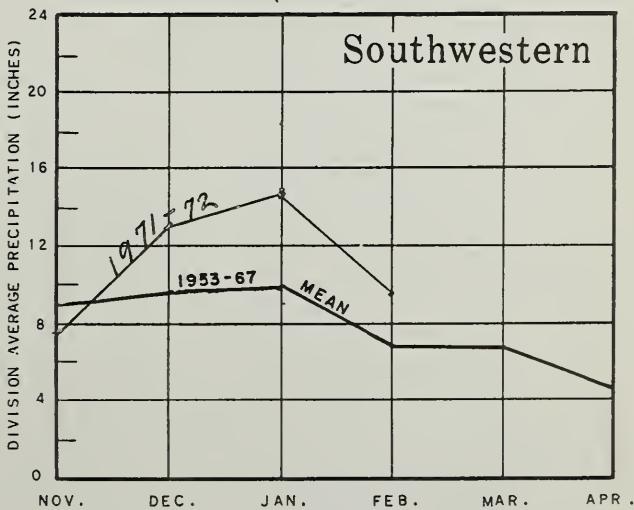
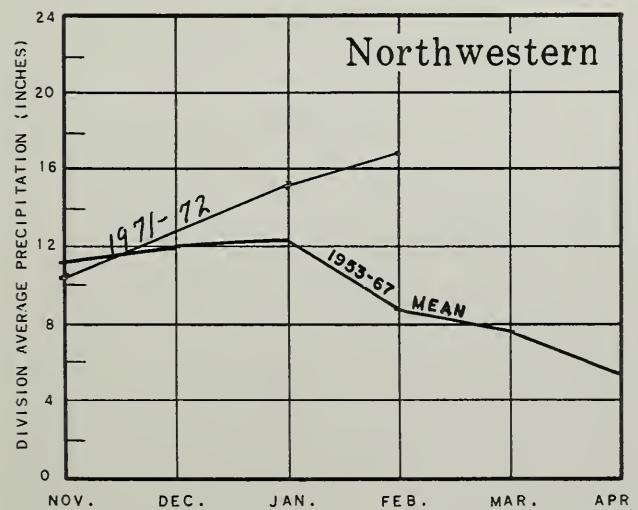
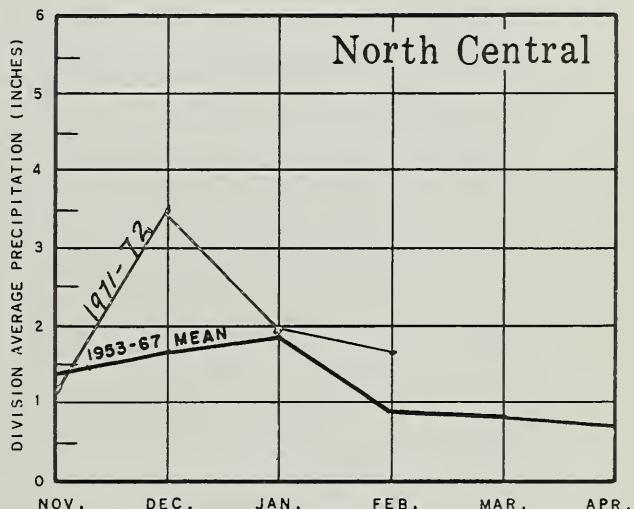
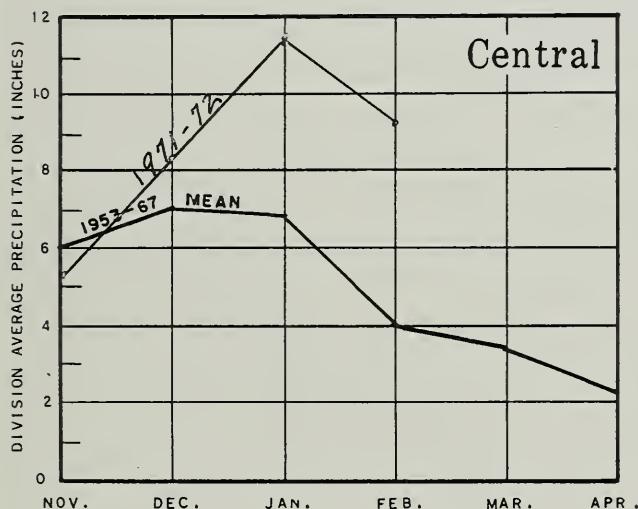
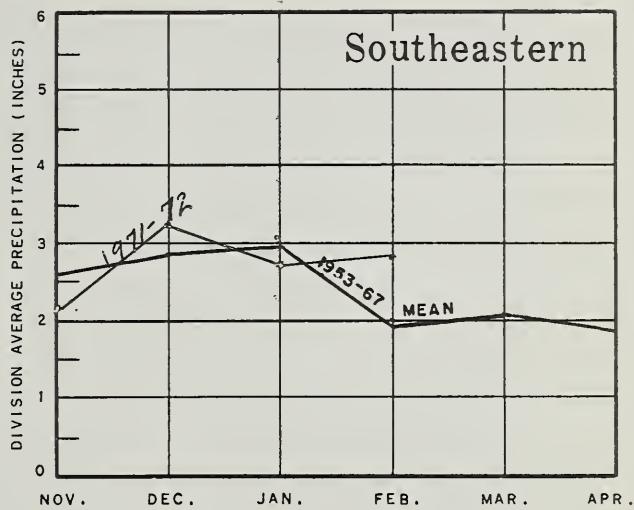
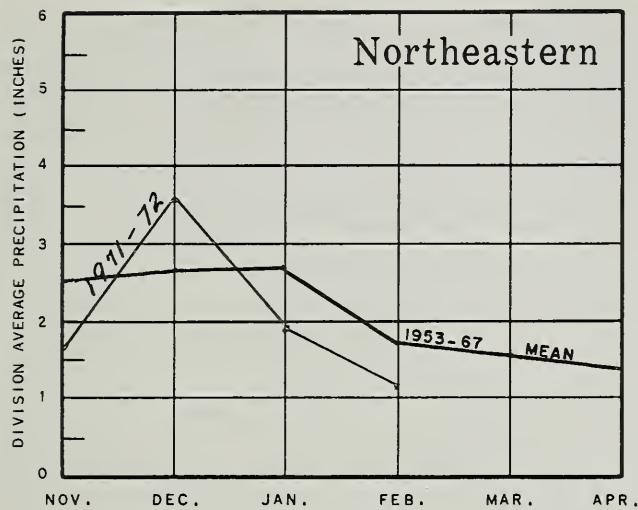
DRAINAGE AREAS



WASHINGTON VALLEY PRECIPITATION

1971-1972

DRAINAGE AREAS

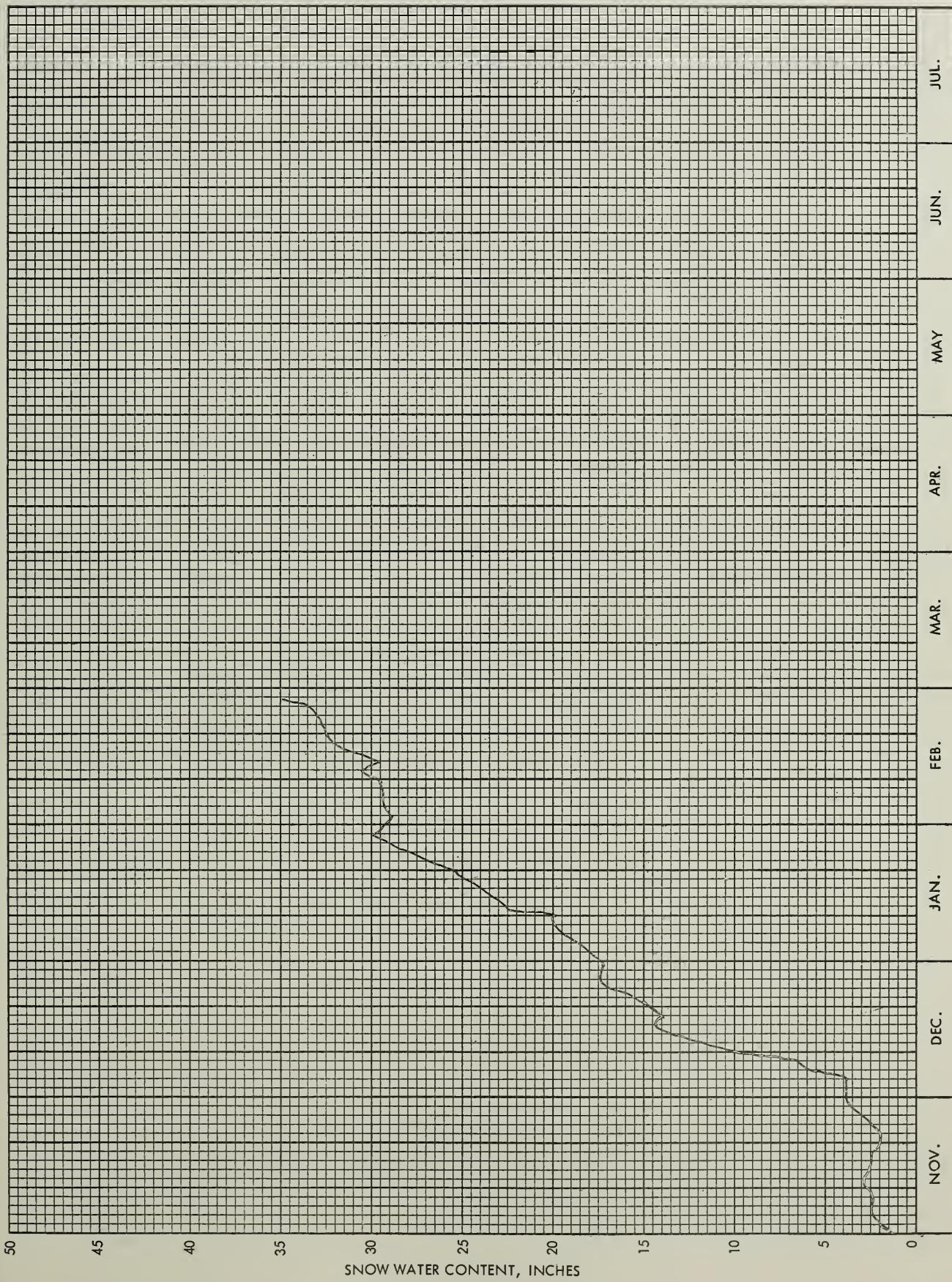


Berne-Mill Creek
SNOW PILLOW DATA

AS OF March 1, 1972

Sec. 13 T. 26N R. 14E No. w1B41SP Drainage: Wenatchee R.

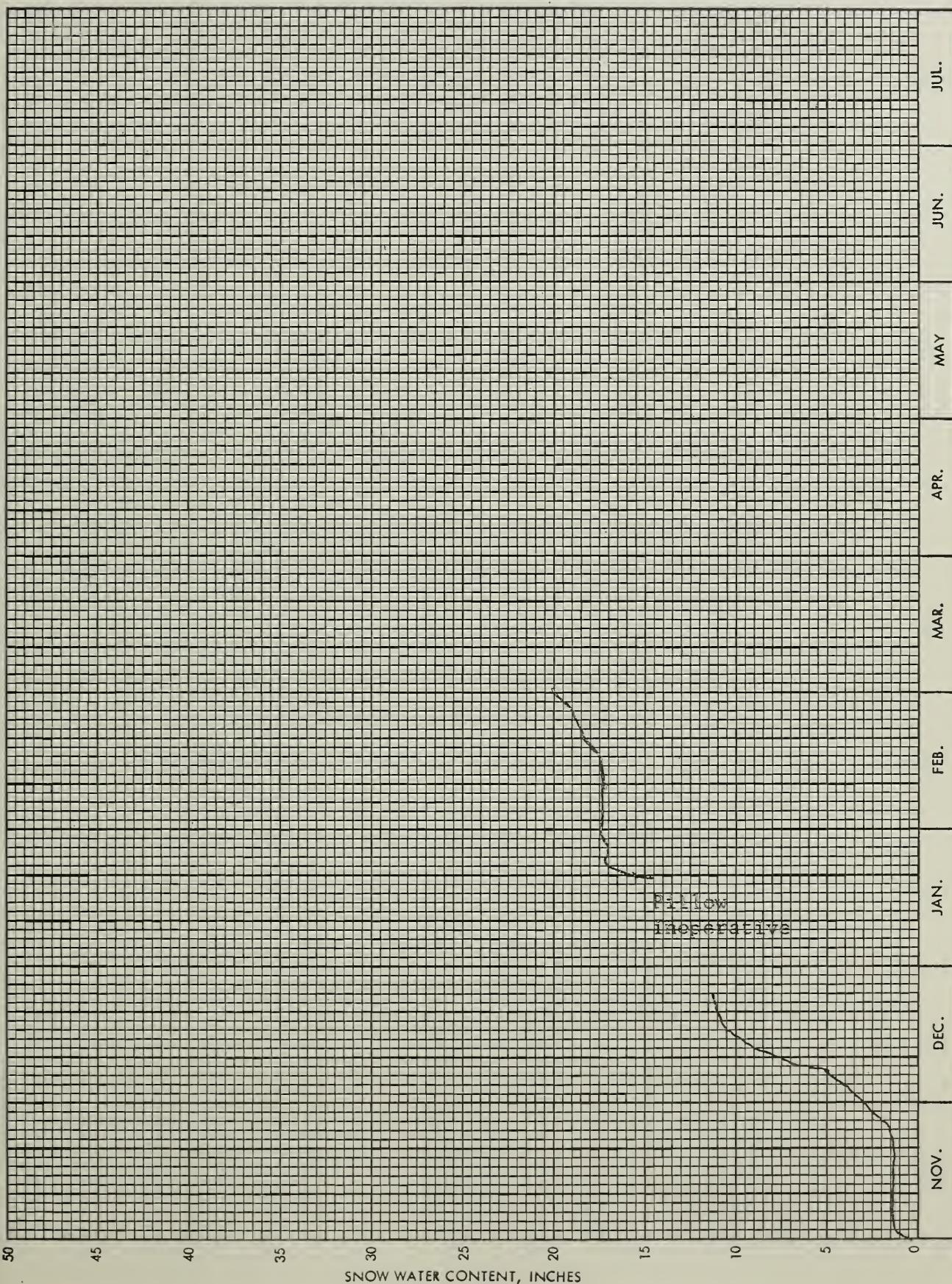
Lat. 47° 45' Long. 121° 42' Elev. 3240'



SNOW PILLOW DATA

Trough No. 2

1971-72

Sec. 10 T. 20N R. 20E No. 20B25SF Drainage: Wenatchee R.Lat. $47^{\circ} 14'$ Long. $120^{\circ} 19'$ Elev. 5310

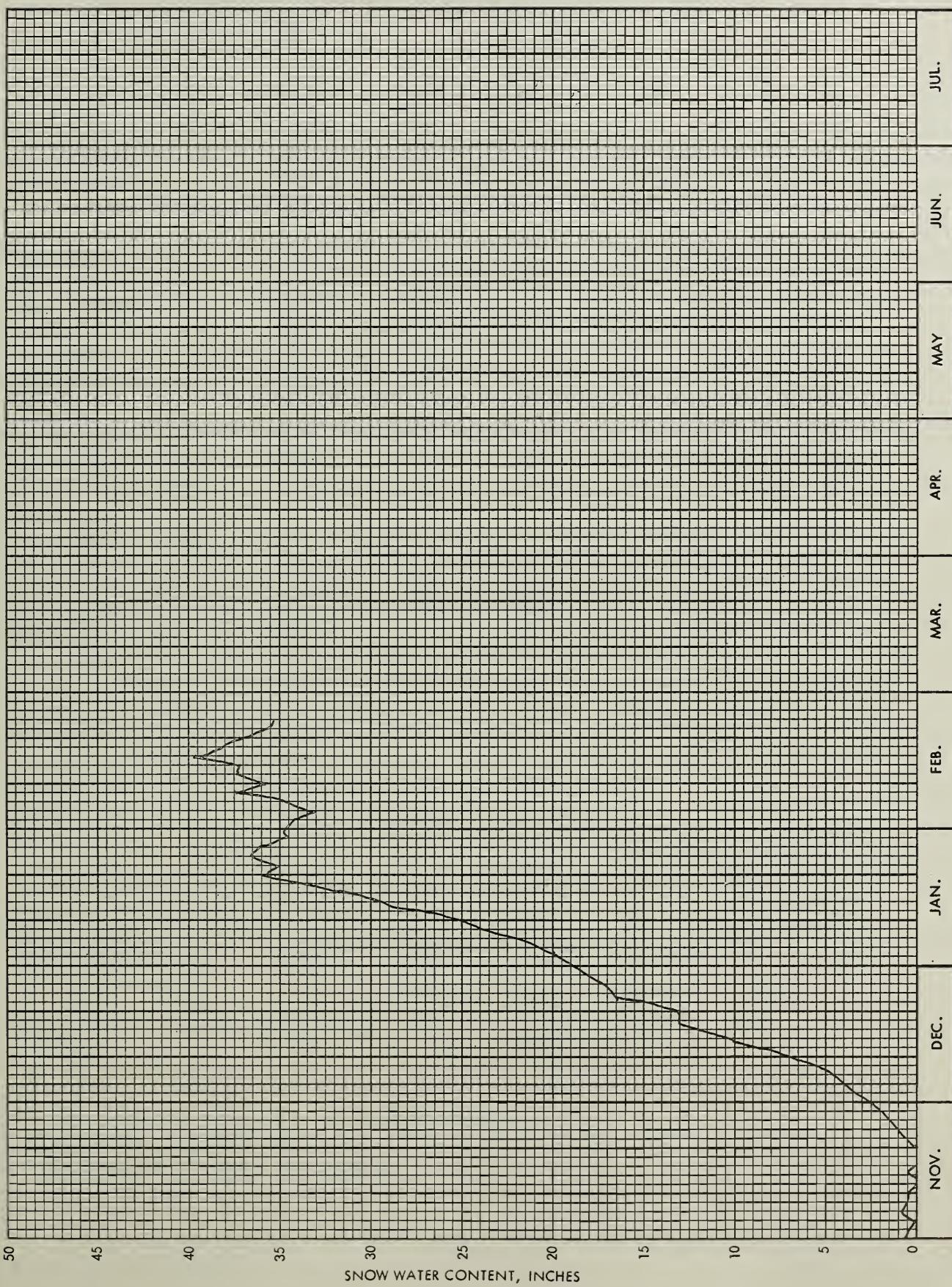
Cougar Mountain - FS

SNOW PILLOW DATA

AS OF March 1, 1972

Sec. 21 T. 21N R. 9E No. 21B42SP Drainage: Green River

Lat. $47^{\circ} 17'$ Long. $121^{\circ} 40'$ Elev. 3200'



APPENDIX 1
SNOW DATA FEBRUARY 1 to MARCH 1, 1972

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD		
NAME	NO.	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	Last Year	Average

U P P E R C O L U M B I A D R A I N A G E

PEND OREILLE RIVER

Benton Meadow	16A2	2344	2/29	13	4.3	7.1	5.8
Benton Spring	16A3	4900	3/1	59	22.0	16.3	18.2
Barree Creek	15B11	5500	2/29	158	64.5	48.0	43.5
Barree Midway	15B16	4600	2/29	134	53.9	38.8	33.8
Barree Trail	15B15	3800	2/29	43	17.4	13.0	8.2
Boyer Mountain	17A2	5250	2/29	64	24.0	27.6	23.4
Brush Creek	14A4	5000	2/29	50	16.8	11.4	11.7
#Chewelah	17A4	4925	2/26	41	12.4	14.9	16.5
Heart Lake Trail	14C10	4800	2/29	101	39.2	28.4	20.2*
Hoodoo Basin	15C10	4800	2/29	171	68.6	56.2	45.6
Hoodoo Creek	15C1	6200	2/29	176	68.8	51.6	42.5
Lockout	15B2	5250	2/29	134	49.3	40.0	32.3
Mosquito Ridge	16A4A	5100	2/29	Pillow	40.0	41.1	33.8**
Nelson	Canada	3050	2/28	63	18.5	14.6	14.5**
Schweitzer Bowl	16A6	4500	3/1	88	37.0	31.5	--
Schweitzer Ridge	16A5	6100	3/1	123	49.7	43.3	--
Winchester Creek	17A3	2970	2/25	56	12.0	12.9	11.3*

KETTLE RIVER

Barnes Creek	Canada	5500	3/3	71	23.9	19.8	17.8**
Big White Mountain	Canada	5500	2/28	59	20.0	16.0	16.9**
Boulder Road	18A2	1450	2/10	20	4.6	7.3	4.3*
			2/24	21	5.7	7.0	3.5*
Butte Creek	18A3	4070	2/10	31	8.6	8.6	8.1*
			2/24	34	9.7	9.3	8.7*
Cabin Creek	18A8	3170	2/10	28	8.2	7.8	7.5*
			2/24	31	8.7	8.7	7.7*
Carmi	Canada	4100	2/28	34	9.0	6.8	6.0**
Farron	Canada	4000	2/29	42	13.2	13.7	12.3**
Goat Creek	18A4	3595	2/10	26	7.0	8.2	6.9*
			2/24	26	7.0	7.6	6.6*
Lower Trapping Cr.	Canada	3050	2/28	31	6.2	6.0	5.1**
#Monashee Pass	Canada	4500	3/3	54	17.4	12.9	12.6**
Old Glory Mountain	Canada	7000	2/26	89	32.2	27.8	24.3**
Snow Caps Creek	18A5	2150	2/10	23	5.2	6.8	4.6*
			2/24	22	5.5	7.0	4.2*
Snow Caps Trail	18A6	2720	2/10	25	6.5	7.2	6.1*
			2/24	25	7.0	8.1	6.1*

Not located directly on this drainage

* Adjusted 1953-67 average

** Average for years of record

APPENDIX 2

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
NAME	NO.	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average ✓

KETTLE RIVER (Cont.)

Summit Guard Station 18A7		4600	Not Measured		6.3	8.0*
					6.9	8.3*
Upper Trapping Cr.	Canada	5500	2/28	39	12.6	9.5
						8.5**

COLVILLE RIVER

Baird	17A6	3215	2/26	30	8.6	5.5	7.0*
Carlson	18A9	2885	2/26	15	4.6	4.2	4.8*
Chewelah	17A4	4925	2/26	41	12.4	14.9	16.5*
Stranger Mtn.	17A5	4990	2/26	35	10.8	17.0	12.4*
Togo	18A10	3370	2/26	36	11.3	14.6	9.4*

SPOKANE RIVER

Above Burke	15B8	4100	2/29	95	29.2	28.6	--
Copper Ridge	16B2	4800	3/1	94	34.2	28.4	26.0
Forty-nine Meadows +	15B3	5000	Late Report		32.8	28.6*	
Fourth of July Summit	16B3	3100	2/29	40	13.2	8.1	10.5*
Granite Peak +	15B13A	6000	Late Report		41.3	41.8*	
#Lookout	15B2	5250	2/29	134	49.3	40.0	32.3
Lost Lake +	15B14A	6000	Late Report		56.4	53.6*	
Lower Sands Creek	16B1	3400	3/1	72	21.1	19.5	17.8
Medicine Ridge +	15B4A	6150	Late Report		43.2	43.6*	
#Mosquito Ridge +	16A4A	5110	3/8	Pillow	43.0	41.1	33.8
Outlaw Creek +	15B12A	3750	Late Report		16.9	13.7*	
Roland Summit +	15B5A	5200	3/8	152	54.7	34.8	34.6*
Sherwin	16C1	3200	2/28	72	24.8	13.4	14.1*
Sunset +	15B9A	5600	3/8	146	52.6	--	29.9*

OKANOGAN RIVER

Aberdeen Lake	Canada	4300	3/1	33	8.6	4.4	5.9**
Blackwall Peak	Canada	6250	2/29	147	52.6	42.4	31.6**
Bouleau Creek	Canada	5000	2/28	45	14.3	13.0	10.3**
Bouleau Lake	Canada	4500	2/27	55	16.8	13.5	--
Brenda Mine	Canada	4800	2/28	63	19.5	14.1	--
Brookmere	Canada	4800	2/27	57	13.0	13.2	9.1**
Carrs Landing Lower	Canada	2250	2/27	21	4.8	1.0	1.5**
Carrs Landing Upper	Canada	3200	2/27	31	7.2	3.6	4.3**

+ Snow water equivalent estimated from aerial stadia observation

Not located directly on this drainage

* Adjusted 1953-67 average

** Average for years of record

APPENDIX 3

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD		
NAME	NO.	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	Last Year	Average

OKANOGAN RIVER (Cont.)

Clark +	19A8a	7000	Not Measured		22.7	18.0*	
Enderby	Canada	6250	2/28	118	46.5	37.0	32.4**
#Freezeout Meadows	20A2	5000	Not Measured		--	28.2	
Hamilton Hill	Canada	4900	2/26	77	26.6	--	13.3**
#Harts Pass	20A5A	6500	Late Report		49.6	38.5	
#Horseshoe Basin +	19A5a	7000	3/3	79	28.4	21.6	11.6*
Isintok Lake	Canada	5510	2/26	46	14.1	8.2	6.8**
Lost Horse Mtn.	Canada	6300	Late Report		9.6	7.7**	
#Loup Loup	19A7	4650	2/24	39	12.0	12.0	8.9*
Lower Esperon Creek	Canada	4270	2/27	48	14.9	13.3	10.6**
McCulloch	Canada	4200	2/26	33	9.0	7.1	6.2**
Middle Esperon Creek	Canada	4580	2/27	56	16.8	17.9	13.6**
Misseezula Mountain	Canada	5100	Late Report		11.2	8.8**	
Mission Creek	Canada	6000	2/28	66	23.3	22.9	17.2**
Monashee Pass	Canada	4500	3/3	54	17.4	12.9	12.6**
Mount Kobau	Canada	5950	2/29	50	15.3	13.3	11.9**
Muckamuck +	19A9a	6390	Not Measured		19.1	--	
Mutton Creek No. 1	19A1	5700	2/24	63	21.8	15.9	12.3
Mutton Creek No. 2	19A4	6000	2/24	59	20.1	16.6	12.7
New Copper Mountain	Canada	4300	2/25	40	12.5	--	5.5**
New Penticton Res.	Canada	5225	2/25	48	12.3	7.2	--
Nickel Plate Mtn.	Canada	6200	2/28	51	13.1	11.9	6.9**
Paysayten +	20A28a	4300	Not Measured		23.2	14.2*	
Postill Lake	Canada	4500	2/29	33	9.9	8.2	7.4**
Rusty Creek	19A3	4000	2/24	35	10.2	7.5	7.0
Salmon Meadows	19A2	4500	2/24	45	13.4	11.2	9.7
Silver Star Mtn.	Canada	6050	2/28	83	32.6	29.2	23.4**
Starvation Mtn. +	19A10a	6750	Not Measured		20.5	17.7*	
Summerland Reservoir	Canada	4200	2/27	54	15.0	10.8	8.4**
Touts Coulee	19A6	2845	2/28	22	6.1	5.2	3.7*
Trout Creek	Canada	4700	2/26	48	13.0	8.4	6.3**
Upper Esperon Creek	Canada	5290	2/27	60	20.1	21.9	17.1**
Vaseux Creek	Canada	4050	2/26	34	7.8	8.8	--
White Rocks Mtn.	Canada	6000	2/28	77	27.5	24.7	18.5**

METHOW RIVER

Billy Goat Pass +	20A10a	6409	Marker Down		49.2	25.8*
Dollar Watch +	20A29a	7000	2/1	75	24.8	25.9
			3/3	115	41.4	32.4
Harts Pass	20A5A	6500	Late Report		49.6	38.5
Horseshoe Basin +	19A5a	7000	2/1	58	19.1	14.1
			3/3	79	28.4	21.6
						9.7*
						11.6*

+ Snow water equivalent estimated from aerial stadia observation

Not located directly on this drainage

* Adjusted 1953-67 average

** Average for years of record

APPENDIX 4

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	Last Year
NAME	No.	Elevation					Average

METHOW RIVER (Cont.)

Loup Loup	19A7	4650	2/25	39	12.0	12.0	8.9*
#Mutton Creek No. 1	19A1	5700	2/24	63	21.8	15.9	12.3
#Mutton Creek No. 2	19A4	6000	2/24	59	20.1	16.6	12.7
#Rusty Creek	19A3	4000	2/24	33	10.2	7.5	7.0
#Salmon Meadows	19A2	4500	2/24	45	13.4	11.2	9.7
#War Creek Pass	20A31a	6500	2/1	125	41.2	37.1	--
			3/3	145	52.2	60.0	--

CHELAN LAKE BASIN

Cloudy Pass +	20A22a	6500	2/1	122	40.3	31.4	29.4*
				Marker buried		48.8	34.9*
Greenwood Flat +	20A25a	3540		Marker buried		--	--
Little Meadows +	20A24a	3275	2/1	118	38.9	30.1	29.9*
				Marker buried		51.6	37.5*
Lyman Lake	20A23A	5900		Marker Down		72.4	50.3*
Park Creek Flat +	20A13a	2220	2/1	106	35.0	28.8	27.8*
			3/3	118	42.5	40.0	31.0*
Park Creek Ridge	20A12A	4600	2/1	185	61.0	38.7	35.3*
			3/3	194	69.8	54.8	41.7*
Petersons +	20A16a	3730	2/1	120	39.6	30.7	26.2*
			3/3	155	55.8	43.2	32.5*
Rainy Pass	20A9	4780	3/4	160	58.4	46.8	37.0
Safety Harbor	20A30A	6300	2/1	90	29.7	28.5	--
				Marker buried		39.2	27.2*
War Creek Pass +	20A31a	6500	2/1	125	41.2	37.1	--
			3/3	145	52.2	60.0	40.8*

ENTIAT RIVER

Brief	20B19	1600	2/23	33	13.2	10.0	6.3*
Entiat Meadows +	20A33a	4800	3/4	154	64.7	51.1	42.7*
Entiat River Trail +	20A34a	3150	3/4	73	30.7	24.2	20.4*
Fox Camp +	20A36a	6510	3/4	188	79.0	56.9	50.7*
Pope Ridge	20B20	4300	2/28	67	28.3	21.6	17.3*
Pugh Ridge +	20A32a	6400	3/4	125	56.7	39.2	31.0*
Shady Pass	20A37	5000	Not Measured			32.0	--
Snow Brushy +	20A35a	3850	3/4	117	49.1	46.4	35.9*
Tommy Creek +	20B21a	5300	3/4	104	43.7	34.6	25.9*

+ Snow water equivalent estimated from aerial stadia observation

* Adjusted 1953-67 average

Not located directly on this drainage

APPENDIX 5

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
NAME	NO.	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches) Last Year	Average Yr
<u>WENATCHEE RIVER</u>							
Berne-Mill Creek	21B23	2925	2/14	102	16.3	33.7	24.0*
			2/28	105	43.5	34.4	23.9*
Berne-Mill Cr. New	21B41SP	3240	2/28	77	33.0	32.8	21.7*
Blewett Pass No. 2	20B2	4270	2/25	79	32.9	19.4	13.8
Chiwaukum C. S.	20B16	1810	2/14	53	19.4	15.5	10.5*
			2/28	55	21.4	16.1	10.5*
#Fish Lake	21B4	3371	2/29	127	55.2	46.4	31.7*
Lake Wenatchee	20B5	1970	2/14	73	23.3	19.3	13.0*
			2/28	71	26.8	18.8	13.4*
Leavenworth R. S.	20B17	1127	2/14	32	10.8	6.7	4.3*
			2/29	26	9.0	4.5	2.6*
#Lyman Lake	20A23A	5900	Marker Down			72.4	50.3*
Merritt	20B18	2140	2/14	73	27.4	19.2	14.6*
			2/28	77	30.6	19.1	13.7*
Stevens Pass	21B1	4070	2/14	163	64.0	58.7	40.3
			2/28	171	77.3	62.1	44.4
Stevens Pass Sand Sh.	21B43	3700	2/14	124	47.4	41.0	--
			2/28	126	55.0	43.3	--
<u>SOQUILCHUCK CREEK</u>							
Beehive Springs	20B3	4400	2/29	33	14.0	5.7	6.5*
Scout-A-Vista	20B4	3400	2/29	31	13.0	8.8	7.0*
<u>STEMILT CREEK</u>							
Jump-Off	20B8	4450	2/28	40	15.8	7.0	6.8*
Stemilt Slide	20B6	5000	2/28	61	24.1	14.1	12.6*
Upper Wheeler	20B7	4400	2/28	43	21.0	9.1	8.5*
<u>COLOCKUM CREEK</u>							
Cclockum Cr. Upper	20B22	5300	2/25	57	24.0	11.0	--
Cclockum Cr. Lower	20B23	4300	2/25	42	16.2	8.9	--
<u>YAKIMA RIVER</u>							
#Ahtanum R. S.	21C11	3100	2/25	31	11.8	7.1	5.9*
Big Boulder Creek	21B9	3200	2/26	84	34.2	26.7	18.5*
#Blewett Pass No. 2	20B2	4270	2/25	79	32.9	19.4	13.8
Bumping Lake	21C8	3450	2/16	53	20.6	21.2	15.1*
			3/1	67	20.4	22.8	15.3

* Adjusted 1953-67 average

Not located directly on this drainage

APPENDIX 6

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	Last Year
NAME	No.	Elevation					Average
<u>YAKIMA RIVER (Cont.)</u>							
Bumping Lake New	21C36	3400	2/16	65	26.2	25.6	17.9*
			3/1	75	26.9	26.4	18.0*
#Cayuse Pass	21C6	5300	3/4	280	112.2	102.7	71.6*
Colockum Pass	20B9	5370	2/25	62	21.6	17.4	14.9*
Cooke Creek	20B10	4123	2/25	40	14.1	7.5	5.6*
#Corral Pass	21C13	6000	3/4	174	61.8	45.8	33.2*
Fish Lake	21B4	3371	2/26	127	55.2	46.4	31.7*
Green Lake	21C10	6000	2/25	118	45.8	38.8	25.7*
Grouse Camp	20B11	5385	2/28	66	24.9	15.5	16.1*
High Creek	20B12	2930	2/28	38	13.6	8.4	5.1*
Lake Cle Elum	21B14M	2200	2/17	60	22.0	4.4	8.5*
			2/28	50	22.2	4.7	8.5*
Lemah Creek +	21B47a	3327	Late Report		49.4	--	
Manashtash	20C1	3935	2/23	28	9.1	3.8	4.0*
Morse Lake	21C17	5400	Not Measured		55.6	47.0*	
Nanum	21B39	2340	2/28	48	18.9	10.6	9.8*
#Olallie Meadows	21B2	3625	3/7	176	79.1	61.6	40.4
#Status Pass	20D1	4030	2/28	35	15.8	14.1	8.0*
#Stampede Pass	21B10	3000	2/15	173	53.0	35.2	34.8
			2/28	157	49.8	36.3	38.4
Trail Creek	20B14	3360	2/25	25	10.1	0.0	--
Tunnel Avenue	21B8	2450	2/16	80	31.3	25.8	20.2*
			2/28	83	33.8	28.9	21.6
Van Epps Pass +	20B26a	5925	Late Report		63.2	--	
Walters Flat	20B15	3360	2/28	35	13.7	8.6	6.6*
Waptus Lake +	21B49a	3024	Late Report		54.2	--	
White Pass (E. Side)	21C28	4500	2/18	107	46.4	30.0	21.5*
			2/28	101	48.7	32.3	21.1*
White Pass (L. Lake)	21C27	4500	Not Measured		34.8	22.6*	
			2/25	123	49.1	29.8	26.1*

AHTANUM CREEK

Ahtanum R. S.	21C11	3100	2/25	31	11.8	7.1	5.9*
#Green Lake	21C10	6000	2/25	118	45.8	38.8	25.7

LOWER COLUMBIA DRAINAGEASOTIN CREEK

Spruce Springs	17C4	5700	2/24	89	32.7	20.7	--
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+ Snow water equivalent estimated from aerial stadia observation

* Adjusted 1953-67 average

Not located directly on this drainage

APPENDIX 7

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
NAME	NO.	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average ✓
<u>MILL CREEK</u>							
Homestead	17C1	4030	2/29	34	15.5	5.0	7.4*
Martin Springs	17C2	4400	2/29	56	23.2	10.4	12.5*
Tollgate	18D3M	5070	2/28	85	38.2	22.8	21.0
<u>KLICKITAT RIVER</u>							
Status Pass	20D1	4030	2/28	35	15.8	14.1	8.0*
<u>WHITE SALMON RIVER</u>							
Cultus Creek	21C12	4000	3/7	147	66.3	64.9	38.9*
#Surprise Lakes	21C13A	4250	3/7	177	85.0	69.3	42.0
<u>WIND RIVER</u>							
Old Man Pass	21D19	3100	3/7	71	31.0	32.9	15.8*
<u>LEWIS RIVER</u>							
Blue Lake +	21C22a	4800	3/7	264	118.8	90.4	70.4*
Bob's Trail	21C21	2200	3/7	67	28.8	22.7	12.4*
Calamity Ridge +	22D1a	2500	3/7	38	17.5	16.4	--
Council Pass +	21C18a	4200	3/7	155	71.3	54.9	34.8*
#Cultus Creek	21C12	4000	3/7	147	66.3	64.9	38.9*
Divide Meadow +	21C29a	5600	3/7	222	99.9	--	47.7*
Grand Meadow	21C25	3500	3/7	100	44.0	31.2	22.9*
Lone Pine Shelter	21C26	3800	3/7	131	60.4	61.1	31.4*
Marble Mountain +	22C5a	3200	3/7	105	52.5	57.4	28.5*
#Mosquito Meadows	21C19	4100	3/7	136	62.0	62.9	34.4*
New Muddy River	22C6	1400	3/7	34	16.1	14.7	9.6*
Old Man Pass	21D19	3100	3/7	71	31.0	32.9	15.8*
Plains of Abraham +	22C1a	4400	3/7	180	86.4	78.8	55.7*
Smith Creek Road	22C4	2100	3/7	61	29.1	27.2	13.9*
Spencer Meadow +	21C20a	3400	3/7	81	37.3	--	20.5*
Surprise Lakes	21C13A	4250	3/7	177	85.0	69.3	42.0
Table Mountain +	21C24a	4200	3/7	153	70.4	59.7	40.6*
Timbered Peak +	21D18a	3000	3/7	48	22.1	23.0	16.4*
<u>COWLITZ RIVER</u>							
Cayuse Pass	21C6	5300	3/4	280	112.2	102.7	71.6*
Mosquito Meadows	21C19	4100	3/7	136	62.0	62.9	34.4*

+ Snow water equivalent estimated from aerial stadia observation

Not located directly on this drainage

* Adjusted 1953-67 average

APPENDIX 8

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR		PAST RECORD	
NAME	NO.	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)
				Last Year	Average	✓

COWLITZ RIVER (Cont.)

Ohanapecosh	21C32	2200	2/25	69	28.6	28.0	14.8*
Packwood Lake	21C31	2870	3/6	80	30.1	22.1	12.0*
Pigtail Peak	21C33	5900	2/17	230	96.8	68.3	53.9*
			2/25	224	94.3	69.7	52.7*
#Plains of Abraham +	22C1a	4400	3/7	180	86.4	78.8	55.7*
Potato Hill	21C14	4500	3/5	132	57.8	44.9	25.7
#White Pass (E. Side)	21C28	4500	2/18	107	46.4	30.0	21.5*
			2/28	101	48.7	32.3	21.1*
#White Pass (L. Lake)	32C27	4500	Not Measured		.	34.8	22.6*
			2/25	123	49.1	29.8	26.1*
Willame Creek	21C30	3250	3/5	122	50.0	42.4	27.0*

P U G E T S O U N D D R A I N A G ENISQUALLY RIVER

Ghost Forest	21C4	4550	3/1	187	79.5	56.0	38.8*
Longmire	21C3	2760	3/1	61	25.2	21.2	8.4*
New Paradise Park	21C35	5500	3/1	247	105.0	82.0	57.9*
Stem Glade	21C1	5050	3/1	244	105.9	85.3	59.4*

WHITE RIVER

#Cayuse Pass	21C6	5300	3/4	280	112.2	102.7	71.6*
Corral Pass	21C13	6000	3/4	174	61.8	45.8	33.2*
#Morse Lake	21C17	5400	Not Measured		.	55.6	47.0*

GREEN RIVER

Airstrip	21B24	1800	2/26	22	9.0	5.0	--
Charley Creek	21B25	1200	2/26	0	0.0	4.0	--
Cougar Mtn. S. P.	21B42SP	3200	2/25	79	35.2	27.0	--
Grass Mtn. No. 2	21B27	2900	2/26	86	36.1	34.7	18.1*
Grass Mtn. No. 3	21B28	2100	2/26	41	15.2	11.5	--
Lester Creek	21B29	3100	2/26	98	37.5	29.4	20.7*
Lynn Lake	21B30	4000	2/26	99	47.6	33.8	--
Sawmill Ridge	21B29	4700	2/26	141	59.5	49.0	36.5*

Not located directly on this drainage

* Adjusted 1953-67 average

+ Snow water equivalent estimated from aerial stadia observation

APPENDIX 9

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
NAME	No.	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average ✓

GREEN RIVER (Cont.)

Snowshoe Butte SP	21B43SP	5000	Late Report		64.0	--
Stampede Pass	21B10	3000	2/15	173	53.0	35.2
			2/28	157	49.8	36.3
Twin Camp	21B30	4100	2/26	89	36.2	30.2

CEDAR RIVER

City Cabin	21B3	2390	2/25	75	30.2	23.9	14.8*
Mt. Gardner	21B21	3300	2/25	74	31.5	23.6	15.4*
Mt. Lindsay	21B16	2500	2/25	69	26.4	22.0	12.9*
Mt. Washington New	21B50	3000	2/29	47	21.0	--	--
Rex River	21B17	2400	2/25	74	29.1	2.8	12.1*
S. F. Cedar	21B6	3000	2/25	89	36.1	28.7	19.2*
Tinkham Creek	21B20	3400	2/25	96	38.1	31.3	20.6*

SNOQUALMIE RIVER

Alpine Meadow	21B48	3500	2/28	148	71.3	49.6	--
#Lake Elizabeth	21B19	2900	2/26	164	60.6	57.6	33.1*
Clallie Meadows	21B2	3625	3/7	176	79.1	61.6	40.4
S. F. Tolt	21B18	1900	2/28	17	6.8	2.5	--

SKYKOMISH RIVER

Lake Elizabeth	21B19	2900	2/26	164	60.6	57.6	33.1*
#Stevens Pass	21B1	4070	2/14	163	64.0	58.7	40.3
			2/28	171	77.3	62.1	44.4
#Stevens Pass S. Shed	21B45	3700	2/14	124	47.4	41.0	--
			2/28	126	55.0	43.3	--

SKAGIT RIVER

Beaver Creek Trail	21A4	2200	Not Measured		23.4	14.0*
Beaver Pass	21A1	3680	3/7	128	48.8	37.1
Brown Top Ridge +	21A28a	6000	3/7	241	93.6	64.0
#Cloudy Pass +	20A22a	6500	Marker buried		48.8	34.9*
Devils Park	20A4	5900	Not Measured		45.5	39.1
Freezeout Cr. Trail	20A1	3500	3/7	68	24.2	19.8
Freezeout Meadows New		5000	3/7	222	77.2	--
Granite Creek	21A29	3500	3/4	92	32.4	18.2
#Harts Pass	20A5A	6500	Late Report		49.6	38.5
Klesilkwa	Canada	3700	2/29	80	29.9	18.6

* Adjusted 1953-67 average

Not located directly on this drainage

+ Snow water equivalent estimated from aerial stadia observation

APPENDIX 10

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	Last Year
NAME	No.	Elevation					Average ✓

SKAGIT RIVER (Cont.)

Lake Hozomeen	21A2	2600	3/7	46	15.5	17.5	9.0*
#Lyman Lake	20A23A	5900	Marker down			72.4	50.3*
Meadow Cabins	20A8	1900	3/4	53	17.1	10.4	7.2*
New Tashme	Canada	2500	2/29	70	22.6	15.1	11.0**
New Lake Hozomeen	21A30	2600	3/7	58	20.5	21.2	--
#Rainy Pass	20A9	4780	3/4	160	58.4	46.8	37.0
Thunder Basin	20A7	4200	3/4	98	33.6	24.2	20.5*

BAKER RIVER

Baker Pass	21A27a	4900	Not Measured		--	--	
Dock Butte +	21A11A	3800	3/4	221	99.4	100.8	65.3*
Easy Pass	21A7A	5200	3/4	255	114.7	86.4	82.1*
Jasper Pass	21A6A	5400	3/4	279	125.5	114.2	87.3*
Marten Lake	21A9A	3600	3/4	254	114.3	92.2	73.3*
Mcunt Blum +	21A18a	5800	3/4	180	81.0	68.6	62.8*
#Panorama New	21A26	4300	2/15	196	77.5	--	--
			3/1	211	95.3	78.7	--
Rocky Creek	21A12A	2100	3/4	118	53.1	57.1	23.3*
Schreibers Meadow	21A10A	3400	3/4	176	79.2	80.6	58.1*
S. F. Thunder Creek	21A14A	2200	3/4	94	42.3	22.1	4.5*
Watson Lakes	21A8A	4500	3/4	216	97.2	88.3	61.3*

NOOKSACK RIVER

Bald Mountain +	21A19a	4400	Marker buried		60.8	--	
Canyon +	21A20a	5100	Marker buried		75.2	--	
Glacier Creek	21A23	3700	3/2	100	36.9	--	--
Panorama New	21A26	4300	2/15	196	77.5	--	--
			3/1	211	95.3	78.7	--
Twin Lakes +	21A21a	5200	Marker buried		90.0	--	

O L Y M P I C P E N I N S U L ADUNGENESS RIVER

Deer Park	23B4	5200	2/29	83	29.9	21.6	20.8
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MORSE CREEK

Cox Valley	23B14	4500	2/25	139	55.0	42.6	--
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+ Snow water equivalent estimated from aerial stadia observation

Not located directly on this drainage

* Adjusted 1953-67 average

APPENDIX 11

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
NAME	No.	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average

ELWHA RIVER

Hurricane	23B3	4500	2/25	83	29.7	23.0	21.8*
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SKOKOMISH RIVER

Black & White	23B7	4200	3/3	130	51.2	53.6	32.3*
Black & White Lakes	23B6	4700	3/3	179	73.4	68.2	49.4*
Four Streams	23B10	3000	3/3	92	38.9	44.1	--
Home Sweet Home	23B5	5200	3/3	225	99.7	82.4	64.2*
Sundown Pass	23B8	3900	Not Measured			75.2	45.4*

* Adjusted 1953-67 average

Agencies Assisting with Snow Surveys

GOVERNMENT AGENCIES

Canada:

Department of Lands, Forests and Water Resources,
Water Resources Service, British Columbia

States:

Washington State Department of Ecology
Washington State Department of Natural Resources

Federal:

Department of the Army
Corps of Engineers
U. S. Department of Agriculture
Forest Service
U. S. Department of Commerce
NOAA, National Weather Service
U. S. Department of the Interior
Bonneville Power Administration
Bureau of Reclamation
Geological Survey
National Park Service

PUBLIC AND PRIVATE UTILITIES

Chelan County P.U.D.
Pacific Power and Light Company
Puget Sound Power and Light Company
Washington Water Power Company

OTHER PUBLIC AGENCIES

Okanogan Irrigation District
Wenatchee Heights Irrigation District

MUNICIPALITIES

City of Tacoma
City of Seattle

*Other organizations and individuals furnish valuable information for
snow survey reports. Their cooperation is gratefully acknowledged.*

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